

Refine Search

Search Results -

Terms	Documents
L69 and (token\$ with (changeable or exchange\$ or trad\$) with (goods or item\$ or product\$ or servic\$))	13

Database:

US Pre-Grant Publication Full-Text Database
 US Patents Full-Text Database
 US OCR Full-Text Database
 EPO Abstracts Database
 JPO Abstracts Database
 Derwent World Patents Index
 IBM Technical Disclosure Bulletins

Search:

L70

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 DATE: Wednesday, March 09, 2005 [Printable Copy](#) [Create Case](#)

Set Name	Query	Hit Count	Set Name
side by side			
DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR			
<u>L70</u>	L69 and (token\$ with (changeable or exchange\$ or trad\$) with (goods or item\$ or product\$ or servic\$))	13	<u>L70</u>
<u>L69</u>	L61 and (((edit\$ or modif\$ or correct\$ or adjust\$) with (number\$ or quantit\$ or amount\$)))	13	<u>L69</u>
<u>L68</u>	L42 and (((edit\$ or modif\$ or correct\$ or adjust\$) with (number\$ or quantit\$ or amount\$)))	0	<u>L68</u>
<u>L67</u>	L66 and token\$	0	<u>L67</u>
<u>L66</u>	L65 and (quantit\$ or amount or value or number)	1	<u>L66</u>
<u>L65</u>	6438217.pn.	1	<u>L65</u>
DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR			
<u>L64</u>	L54 and ((attach\$ or remov\$) with chip\$)	2	<u>L64</u>

Best Available Copy

<u>L63</u>	L61 and ((attach\$ or remov\$) with chip\$)	0	<u>L63</u>
<u>L62</u>	L61 and (electronic\$ same token)	4	<u>L62</u>
<u>L61</u>	((edit\$ or correct\$ or adjust\$) with (number\$ or quantit\$ or amount\$))) and (token\$ with (changeable or exchange\$ or trad\$) with (goods or item\$ or product\$ or service)) and @ad<=19980623	14	<u>L61</u>
<i>DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR</i>			
<u>L60</u>	L59 and token\$ and (radio\$ with network\$) and @ad<=19980623 and (((edit\$ or correct\$ or adjust\$) with (number\$ or quantit\$ or amount\$))) and (token\$ with (changeable or exchange\$ or trad\$) with (goods or item\$ or product\$ or service))	0	<u>L60</u>
<u>L59</u>	6366893.pn.	1	<u>L59</u>
<i>DB=PGPB,EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR</i>			
<u>L58</u>	token\$ and (radio\$ with network\$) and @ad<=19980623 and (((edit\$ or correct\$ or adjust\$) with (number\$ or quantit\$ or amount\$))) and (token\$ with (changeable or exchange\$ or trad\$) with (goods or item\$ or product\$ or service))	1	<u>L58</u>
<u>L57</u>	token\$ and (radio\$ with network\$) and @pd<=19980623 and (((edit\$ or correct\$ or adjust\$) with (number\$ or quantit\$ or amount\$))) and (token\$ with (changeable or exchange\$ or trad\$) with (goods or item\$ or product\$ or service))	0	<u>L57</u>
<i>DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR</i>			
<u>L56</u>	L54 and (token\$ with (changeable or exchange\$ or trad\$) with (goods or item\$ or product\$ or service))	2	<u>L56</u>
<u>L55</u>	705/26-28.ccls. and token\$ and (radio\$ with network\$) and @ad<=19980623 and (((edit\$ or modif\$ or correct\$ or adjust\$) with (number\$ or quantit\$ or amount\$)))	3	<u>L55</u>
<u>L54</u>	token\$ and (radio\$ with network\$) and @ad<=19980623 and (((edit\$ or correct\$ or adjust\$) with (number\$ or quantit\$ or amount\$)))	159	<u>L54</u>
<u>L53</u>	149 and 705/?ccls.	1	<u>L53</u>
<u>L52</u>	150 not L51	15	<u>L52</u>
<u>L51</u>	L50 and (order\$ with (service or goods or product or item))	9	<u>L51</u>
<u>L50</u>	L49 and (text\$ near2 message)	24	<u>L50</u>
<u>L49</u>	token\$ and (radio\$ with network\$) and @ad<=19980623 and (((edit\$ or correct\$ or adjust\$) with (quantit\$ or amount\$)))	59	<u>L49</u>
<u>L48</u>	L4 and (token\$ and ((edit\$ or correct\$ or adjust\$) with (quantit\$ or amount\$)))	11	<u>L48</u>
<u>L47</u>	L4 and (token\$ same ((edit\$ or correct\$ or adjust\$) with (quantit\$ or amount\$)))	0	<u>L47</u>
<u>L46</u>	L4 and (token\$ with (quantit\$ or amount\$))	1	<u>L46</u>
<u>L45</u>	L5 and (token\$ with (quantit\$ or amount\$))	1	<u>L45</u>
<u>L44</u>	L43 and (text\$ near2 message)	7	<u>L44</u>
<u>L43</u>	token and (remov\$ with chip\$) and (order\$ with (service or goods or product or item)) and @ad<=19980623	46	<u>L43</u>
<u>L42</u>	L4 and 705/26-28.ccls.	0	<u>L42</u>
<u>L41</u>	L40 and 705/26-28.ccls.	2	<u>L41</u>
	token and (remov\$ with chip\$) and (order\$ with (service or goods or product or		

<u>L40</u>	item)) and @ad<=19980623	46	<u>L40</u>
<u>L39</u>	token and (remov\$ with (chip near2 card)) and (order\$ with (service or goods or product or item)) and @ad<=19980623	2	<u>L39</u>
<u>L38</u>	token and (chip near2 card) and (order\$ with (service or goods or product or item)) and @ad<=19980623	48	<u>L38</u>
<u>L37</u>	token and "chip-card" and (order\$ with (service or goods or product or item)) and @ad<=19980623	0	<u>L37</u>
<u>L36</u>	token and chipcard and (order\$ with (service or goods or product or item)) and @ad<=19980623	7	<u>L36</u>
<u>L35</u>	L33 and (order\$ with (service or goods or product or item))	2	<u>L35</u>
<u>L34</u>	L33 and (service or goods or product or item)	10	<u>L34</u>
<u>L33</u>	L11 and (token\$ and chip\$)	10	<u>L33</u>
<u>L32</u>	L19 and (token\$ and chip\$)	0	<u>L32</u>
<u>L31</u>	L20 and ((text\$ or messag\$) with protocol)	6	<u>L31</u>
<u>L30</u>	L20 and (text\$ with messag\$ with protocol)	0	<u>L30</u>
<u>L29</u>	L27 and (token\$ and chip\$)	0	<u>L29</u>
<u>L28</u>	L27 and (token\$ or chip\$)	4	<u>L28</u>
<u>L27</u>	L11 and (text\$ with messag\$)	4	<u>L27</u>
<u>L26</u>	L16 and (text\$ with messag\$)	0	<u>L26</u>
<u>L25</u>	L16 and (text\$ withmessag\$)	2	<u>L25</u>
<u>L24</u>	L16 and (text\$ near2 messag\$)	0	<u>L24</u>
<u>L23</u>	L16 and (text near2 message)	0	<u>L23</u>
<u>L22</u>	L19 and token	0	<u>L22</u>
<u>L21</u>	L20 and token	0	<u>L21</u>
<u>L20</u>	L19 and (text near2 message)	14	<u>L20</u>
<u>L19</u>	L4 and (ussd and sms)	34	<u>L19</u>
<u>L18</u>	L5 and (ussd and sms)	0	<u>L18</u>
<u>L17</u>	L6 and (ussd and sms)	0	<u>L17</u>
<u>L16</u>	L11 and (chip\$ with card)	2	<u>L16</u>
<u>L15</u>	L13 and (chip\$ with card)	0	<u>L15</u>
<u>L14</u>	L13 and (sim\$ with card)	0	<u>L14</u>
<u>L13</u>	L12 and ((chip or sim\$) or remov\$ or detach\$ or attach\$)	25	<u>L13</u>
<u>L12</u>	L11 and (order\$ with (service or goods or product or item))	25	<u>L12</u>
<u>L11</u>	L6 not l8	48	<u>L11</u>
<u>L10</u>	L5 and 705/? .ccls.	1	<u>L10</u>
<u>L9</u>	L5 and 705/26-28.ccls.	0	<u>L9</u>
<u>L8</u>	L6 and 705/? .ccls.	1	<u>L8</u>
<u>L7</u>	L6 and 705/26-28.ccls.	0	<u>L7</u>
<u>L6</u>	L5 and transaction	49	<u>L6</u>
<u>L5</u>	token\$ and (mobile with radio\$ with network\$) and @ad<=19980623	104	<u>L5</u>
<u>L4</u>	((mobile with radio\$) same network\$) and @ad<=19980623	4100	<u>L4</u>
<u>L3</u>	L1 and token\$	1	<u>L3</u>

L2 L1 and radio\$

1 L2

L1 5867494.pn.

1 L1

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Search Results - Record(s) 1 through 10 of 13 returned.

☐ 1. Document ID: US 6594692 B1

L70: Entry 1 of 13

File: USPT

Jul 15, 2003

US-PAT-NO: 6594692

DOCUMENT-IDENTIFIER: US 6594692 B1

**** See image for Certificate of Correction ****

TITLE: Methods for transacting electronic commerce

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	FIGURE	Draw De
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☐ 2. Document ID: US 6443840 B1

L70: Entry 2 of 13

File: USPT

Sep 3, 2002

US-PAT-NO: 6443840

DOCUMENT-IDENTIFIER: US 6443840 B1

TITLE: Evaluation of responses of participatory broadcast audience with prediction of winning contestants; monitoring, checking and controlling of wagering, and automatic crediting and couponing

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	FIGURE	Draw De
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☐ 3. Document ID: US 6229533 B1

L70: Entry 3 of 13

File: USPT

May 8, 2001

US-PAT-NO: 6229533

DOCUMENT-IDENTIFIER: US 6229533 B1

TITLE: Ghost object for a virtual world

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	FIGURE	Draw De
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☐ 4. Document ID: US 6125388 A

L70: Entry 4 of 13

File: USPT

Sep 26, 2000

US-PAT-NO: 6125388

DOCUMENT-IDENTIFIER: US 6125388 A

TITLE: System for transporting information objects between a user station and multiple remote sources based upon user modifiable object manifest stored in the user station

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	Keywords	Drawings
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☐ 5. Document ID: US 6026385 A

L70: Entry 5 of 13

File: USPT

Feb 15, 2000

US-PAT-NO: 6026385

DOCUMENT-IDENTIFIER: US 6026385 A

TITLE: Encrypted postage indicia printing for mailer inserting systems

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	Keywords	Drawings
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☐ 6. Document ID: US 5936149 A

L70: Entry 6 of 13

File: USPT

Aug 10, 1999

US-PAT-NO: 5936149

DOCUMENT-IDENTIFIER: US 5936149 A

TITLE: Personal date/time notary device

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	Keywords	Drawings
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☐ 7. Document ID: US 5694546 A

L70: Entry 7 of 13

File: USPT

Dec 2, 1997

US-PAT-NO: 5694546

DOCUMENT-IDENTIFIER: US 5694546 A

TITLE: System for automatic unattended electronic information transport between a server and a client by a vendor provided transport software with a manifest list

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	Keywords	Drawings
------	-------	----------	-------	--------	----------------	------	-----------	--------	----------	----------

☐ 8. Document ID: US 5422953 A

L70: Entry 8 of 13

File: USPT

Jun 6, 1995

US-PAT-NO: 5422953

DOCUMENT-IDENTIFIER: US 5422953 A

TITLE: Personal date/time notary device

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	Keywords	Drawings
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☐ 9. Document ID: US 4915205 A

L70: Entry 9 of 13

File: USPT

Apr 10, 1990

US-PAT-NO: 4915205

DOCUMENT-IDENTIFIER: US 4915205 A

TITLE: Apparatus for dispensing and receiving rented articles

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	Keywords	Drawings
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☐ 10. Document ID: US 4843606 A

L70: Entry 10 of 13

File: USPT

Jun 27, 1989

US-PAT-NO: 4843606

DOCUMENT-IDENTIFIER: US 4843606 A

TITLE: Local area communication system for integrated services based on a token-ring transmission medium

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	Keywords	Drawings
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Terms

L69 and (token\$ with (changeable or exchange\$ or trad\$) with (goods or item\$ or product\$ or servic\$))

Documents

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☐ 11. Document ID: US 4814970 A

L70: Entry 11 of 13

File: USPT

Mar 21, 1989

US-PAT-NO: 4814970

DOCUMENT-IDENTIFIER: US 4814970 A

TITLE: Multiple-hierarchical-level multiprocessor system

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	FIGS	Draw. De
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☐ 12. Document ID: US 4311227 A

L70: Entry 12 of 13

File: USPT

Jan 19, 1982

US-PAT-NO: 4311227

DOCUMENT-IDENTIFIER: US 4311227 A

**** See image for Reexamination Certificate ****

TITLE: Vending system for floral type products

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	FIGS	Draw. De
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☐ 13. Document ID: US 4205741 A

L70: Entry 13 of 13

File: USPT

Jun 3, 1980

US-PAT-NO: 4205741

DOCUMENT-IDENTIFIER: US 4205741 A

TITLE: Anti-cheat mechanism for coin actuated vending machine

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	FIGS	Draw. De
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[Clear](#)[Generate Collection](#)[Print](#)[Fwd Refs](#)[Bkwd Refs](#)[Generate OACS](#)

Terms	Documents
L69 and (token\$ with (changeable or exchange\$ or trad\$) with (goods or item\$ or product\$ or servic\$))	13

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(32)

L70: Entry 3 of 13

File: USPT

May 8, 2001

DOCUMENT-IDENTIFIER: US 6229533 B1

TITLE: Ghost object for a virtual world

Abstract Text (1):

A virtual world computer process includes portable virtual token objects that can be used by on-line users of the virtual world to facilitate exchange of goods and services within the virtual world. In particular, client-server computer processes are provided for the virtual world that allow on-line users to conduct activities within the virtual world including getting, putting, giving, and receiving portable virtual token objects as well as other portable virtual objects. Each on-line user is represented in the graphic user interface by a virtual avatar object. Token objects are put into circulation by virtual ATM objects. A virtual ATM object allows a user to obtain a balance, deposit tokens, and withdraw tokens. A vendroid object is an object that sells portable virtual items in exchange for tokens deposited by avatars. Different virtual items have different values, and vendroids do not all have the same virtual items for sale. In the virtual world, a lurker is represented in a locale by a ghost object. An icon is present, i.e., an eye-in-the-sky, in a locale, whenever a ghost object, or ghost objects are present. Ghost objects have anonymity, i.e., their names are not known to avatars of the locale, and have limited interaction choices. A ghost object cannot talk or think to other avatars. A ghost object retains the ability to transmit private "ESP" messages to other avatars.

Application Filing Date (1):

19960802

Brief Summary Text (27):

Exchange of token objects or any other portable virtual objects can be mediated by one of the server processes, and so theft or fraud are difficult. However, approval for transactions between avatars is not controlled by the server processes, or by the service provider. On-line users are free to transact exchanges of either tokens or other portable virtual objects through their respective avatars without needing the approval or intervention of the service provider.

Brief Summary Text (34):

Token objects can be exchanged with other on-line users for goods or services, given as gifts, or left lying around, like dropped cash. Unlike cash, token objects cannot be taken by another avatar without the consent of the avatar holding the token object. However, any avatar is free to get a token object lying on the ground.

Detailed Description Text (2):

The on-line community of this invention, i.e., a virtual world computer process, herein after referred to as "the virtual world", includes portable virtual token objects that can be used by on-line users of the world to facilitate exchange of goods and services within the virtual world. In particular, client-server computer processes are provided for the virtual world that allow on-line users to conduct activities within the virtual world including getting, putting, giving, and receiving portable virtual token objects as well as other portable virtual objects. These operations facilitate development of commerce that is enjoyable and

contributes to perceived quality of life within the virtual world relative to the prior art virtual worlds that limited the on-line users to discussion or playing simple games.

Detailed Description Text (19):

Exchange of token objects or any other portable virtual objects can be mediated by one of server processes 250, and so theft or fraud are difficult. However, approval for transactions between avatars is not controlled by server processes 250 or by service provider 270. On-line users 225-1 to 225-n are free to transact exchanges of either tokens or other portable virtual objects through their respective avatars without needing the approval or intervention of service provider 270.

Detailed Description Text (25):

Token objects can be exchanged with other on-line users for goods or services, given as gifts, or left lying around, like dropped cash. Unlike cash, token objects cannot be taken by another avatar without the is consent of the avatar holding the token object. However, any avatar is free to get a token object lying on the ground.

Detailed Description Text (693):

Adjust tokens denomination by subtracting deposit amount.

Detailed Description Text (715):

Adjust tokens denomination by subtracting deposit amount.

Detailed Description Text (750):

As explained above, vendriods are instance of a class vendroid and are virtual vending machine objects, such as virtual vending machine object 120 (FIG. 1). A vendroid object is an object that sells portable virtual items in exchange for tokens deposited by avatars. Different virtual items have different values, and vendroids do not all have the same virtual items for sale. Portable virtual items can be resold to pawn machines at a price set below the original price by the oracles, typically eighty percent of the original price. Vendroid items are stocked by the oracles and in this embodiment, the vendroids are maintained at full capacity. The vendroid item last displayed in the window of the vendroid remains after avatar 100 has stopped interacting with vendroid. In one embodiment, there is a limit of 32 bytes for menu titles and menu items for a vendroid 120.

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L70: Entry 3 of 13

File: USPT

May 8, 2001

US-PAT-NO: 6229533

DOCUMENT-IDENTIFIER: US 6229533 B1

TITLE: Ghost object for a virtual world

DATE-ISSUED: May 8, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Farmer; Randy	Cupertino	CA		
Onusko; John E.	San Francisco	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Fujitsu Limited	Kawasaki			JP	03

APPL-NO: 08/ 691793 [\[PALM\]](#)

DATE FILED: August 2, 1996

INT-CL: [07] [G06 F 3/00](#)

US-CL-ISSUED: 345/331; 345/330, 345/332, 345/335, 345/349

US-CL-CURRENT: [345/473](#); [715/769](#)

FIELD-OF-SEARCH: 345/326, 345/330, 345/331, 345/332, 345/334, 345/335, 345/348, 345/349, 345/355, 345/976, 345/977

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	5347306	September 1994	Nitta	345/330 X
<input type="checkbox"/>	5491743	February 1996	Shiio et al.	345/322 X
<input type="checkbox"/>	5544320	August 1996	Konrad	395/200.33
<input type="checkbox"/>	5606652	February 1997	Silverbrook	345/435
<input type="checkbox"/>	5684943	November 1997	Abraham et al.	345/473
<input type="checkbox"/>	5717869	February 1998	Moran et al.	345/339
<input type="checkbox"/>	5717879	February 1998	Moran et al.	345/339

<input type="checkbox"/>	<u>5736982</u>	April 1998	Suzuki et al.	345/330
<input type="checkbox"/>	<u>5880731</u>	March 1999	Liles et al.	345/349
<input type="checkbox"/>	<u>5886697</u>	March 1999	Naughton et al.	345/348

OTHER PUBLICATIONS

"Valentine's Day Wedding In A Virtual World", Newsbytes, p. 1, Feb. 14, 1996.*
"Picture Perfect Shopping Solution For The Web", BRP Publications, pp. 1-3, Mar. 19, 1996.*
Harley Guttman Ungar, "Online service chat: it won't go away", Interactive Content, v2, N24, p8(3), Apr. 1996.*
Pioch, N., "A Short IRC Primer," Nicolas. Pioch@grasp.insa-lyon.fr (Ed.1.1b, Feb. 28, 1993), 41 pages.
Rose, H. "What is IRC?," Hrose@kei.com, undated, 6 pages.
Fukuda, K., et al., "Hypermedia Personal Computer Communication System: Fujitsu Habitat," Fujitsu Sci. Tech. J., 26, 3, pp. 197-205 (Oct. 1990).
Morabito, M., "Enter the On-Line World of Lucasfilm," RUN, pp. 24-28 (Aug. 1986).
Club Caribe Guidebook, Club Caribe Technology by Lucasfilm Ltd., 1989 Quantum Computer Services, Inc., 1989 Lucasfilm Ltd., 10 pages (1989).
Fujitsu Habitat V2.1, Fujitsu Limited, 6 pp. (1989-1992).

ART-UNIT: 273

PRIMARY-EXAMINER: Bayerl; Raymond J.

ASSISTANT-EXAMINER: Bautista; X. L.

ATTY-AGENT-FIRM: Skjerven Morrill MacPherson LLP Kwok; Edward C.

ABSTRACT:

A virtual world computer process includes portable virtual token objects that can be used by on-line users of the virtual world to facilitate exchange of goods and services within the virtual world. In particular, client-server computer processes are provided for the virtual world that allow on-line users to conduct activities within the virtual world including getting, putting, giving, and receiving portable virtual token objects as well as other portable virtual objects. Each on-line user is represented in the graphic user interface by a virtual avatar object. Token objects are put into circulation by virtual ATM objects. A virtual ATM object allows a user to obtain a balance, deposit tokens, and withdraw tokens. A vendroid object is an object that sells portable virtual items in exchange for tokens deposited by avatars. Different virtual items have different values, and vendroids do not all have the same virtual items for sale. In the virtual world, a lurker is represented in a locale by a ghost object. An icon is present, i.e., an eye-in-the-sky, in a locale, whenever a ghost object, or ghost objects are present. Ghost objects have anonymity, i.e. their names are not known to avatars of the locale, and have limited interaction choices. A ghost object cannot talk or think to other avatars. A ghost object retains the ability to transmit private "ESP" messages to other avatars.

19 Claims, 48 Drawing figures

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☐ 1. Document ID: US 20010003099 A1

Using default format because multiple data bases are involved.

L62: Entry 1 of 4

File: PGPB

Jun 7, 2001

PGPUB-DOCUMENT-NUMBER: 20010003099

PGPUB-FILING-TYPE: new-utility

DOCUMENT-IDENTIFIER: US 20010003099 A1

TITLE: EVALUATION OF RESPONSES OF PARTICIPATORY BROADCAST AUDIENCE WITH PREDICTION OF WINNING CONTESTANTS; MONITORING, CHECKING AND CONTROLLING OF WAGERING, AND AUTOMATIC CREDITING AND COUPONING

PUBLICATION-DATE: June 7, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
VON KOHORN, HENRY	VERO BEACH	FL	US	

US-CL-CURRENT: 463/40; 463/16

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	FIGURE	Draw. De
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☐ 2. Document ID: US 6443840 B1

L62: Entry 2 of 4

File: USPT

Sep 3, 2002

US-PAT-NO: 6443840

DOCUMENT-IDENTIFIER: US 6443840 B1

TITLE: Evaluation of responses of participatory broadcast audience with prediction of winning contestants; monitoring, checking and controlling of wagering, and automatic crediting and couponing

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	FIGURE	Draw. De
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☐ 3. Document ID: US 6026385 A

L62: Entry 3 of 4

File: USPT

Feb 15, 2000

US-PAT-NO: 6026385

DOCUMENT-IDENTIFIER: US 6026385 A

TITLE: Encrypted postage indicia printing for mailer inserting systems

Full	Title	Citation	Front	Review	Classification	Date	Reference	Image	Image	Claims	Image	Draw. Des
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☐ 4. Document ID: US 4311227 A

L62: Entry 4 of 4

File: USPT

Jan 19, 1982

US-PAT-NO: 4311227

DOCUMENT-IDENTIFIER: US 4311227 A

**** See image for Reexamination Certificate ****

TITLE: Vending system for floral type products

Full	Title	Citation	Front	Review	Classification	Date	Reference	Image	Image	Claims	Image	Draw. Des
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Terms

Documents

L61 and (electronic\$ same token)

4

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L54 and (token\$ with (changeable or exchange\$ or trad\$) with (goods or item\$ or product\$ or service))	2

Database:

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 IBM Technical Disclosure Bulletins

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L56

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Search History

 DATE: **Wednesday, March 09, 2005** [Printable Copy](#) [Create Case](#)

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	<i>DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR</i>		
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<u>L55</u>	705/26-28.ccls. and token\$ and (radio\$ with network\$) and @ad<=19980623 and (((edit\$ or modif\$ or correct\$ or adjust\$) with (number\$ or quantit\$ or amount\$)))	3	<u>L55</u>
<u>L54</u>	token\$ and (radio\$ with network\$) and @ad<=19980623 and (((edit\$ or correct\$ or adjust\$) with (number\$ or quantit\$ or amount\$)))	159	<u>L54</u>
<u>L53</u>	149 and 705/?.ccls.	1	<u>L53</u>
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<u>L48</u>	L4 and (token\$ and ((edit\$ or correct\$ or adjust\$) with (quantit\$ or amount\$)))	11	<u>L48</u>
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<u>L33</u>	L11 and (token\$ and chip\$)	10	<u>L33</u>
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<u>L27</u>	L11 and (text\$ with messag\$)	4	<u>L27</u>
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<u>L25</u>	L16 and (text\$ withmessag\$)	2	<u>L25</u>
<u>L24</u>	L16 and (text\$ near2 messag\$)	0	<u>L24</u>
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<u>L22</u>	L19 and token	0	<u>L22</u>
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<u>L19</u>	L4 and (ussd and sms)	34	<u>L19</u>
<u>L18</u>	L5 and (ussd and sms)	0	<u>L18</u>
<u>L17</u>	L6 and (ussd and sms)	0	<u>L17</u>
<u>L16</u>	L11 and (chip\$ with card)	2	<u>L16</u>
<u>L15</u>	L13 and (chip\$ with card)	0	<u>L15</u>
<u>L14</u>	L13 and (sim\$ with card)	0	<u>L14</u>

<u>L13</u>	L12 and ((chip or sim\$) or remov\$ or detach\$ or attach\$)	25	<u>L13</u>
<u>L12</u>	L11 and (order\$ with (service or goods or product or item))	25	<u>L12</u>
<u>L11</u>	L6 not l8	48	<u>L11</u>
<u>L10</u>	L5 and 705/? .ccls.	1	<u>L10</u>
<u>L9</u>	L5 and 705/26-28.ccls.	0	<u>L9</u>
<u>L8</u>	L6 and 705/? .ccls.	1	<u>L8</u>
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<u>L6</u>	L5 and transaction	49	<u>L6</u>
<u>L5</u>	token\$ and (mobile with radio\$ with network\$) and @ad<=19980623	104	<u>L5</u>
<u>L4</u>	((mobile with radio\$) same network\$) and @ad<=19980623	4100	<u>L4</u>
<u>L3</u>	L1 and token\$	1	<u>L3</u>
<u>L2</u>	L1 and radio\$	1	<u>L2</u>
<u>L1</u>	5867494.pn.	1	<u>L1</u>

END OF SEARCH HISTORY

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Search Results - Record(s) 1 through 2 of 2 returned.☐ 1. Document ID: US 6443840 B1

L56: Entry 1 of 2

File: USPT

Sep 3, 2002

US-PAT-NO: 6443840

DOCUMENT-IDENTIFIER: US 6443840 B1

TITLE: Evaluation of responses of participatory broadcast audience with prediction of winning contestants; monitoring, checking and controlling of wagering, and automatic crediting and couponing

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstracts	Abstracts	Claims	FIGS	Draws
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☐ 2. Document ID: US 6026385 A

L56: Entry 2 of 2

File: USPT

Feb 15, 2000

US-PAT-NO: 6026385

DOCUMENT-IDENTIFIER: US 6026385 A

TITLE: Encrypted postage indicia printing for mailer inserting systems

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstracts	Abstracts	Claims	FIGS	Draws
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Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs	Generate OACS
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Terms	Documents
L54 and (token\$ with (changeable or exchange\$ or trad\$) with (goods or item\$ or product\$ or service))	2

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L55: Entry 1 of 3

File: USPT

Nov 5, 2002

DOCUMENT-IDENTIFIER: US 6477508 B1

TITLE: System and apparatus for broadcasting, capturing, storing, selecting and then forwarding selected product data and viewer choices to vendor host computers

Application Filing Date (1):
19980305Brief Summary Text (5):

Broadcast commercials are usually very effective at achieving their objectives. For that reason, broadcast providers, i.e., TV and radio networks and broadcast stations, are able to demand large sums of money for broadcast "time" during which a vendor's commercial will be broadcast. Such broadcast time may be, e.g., a relatively short 30 or 60 seconds, as is common with the ever-present TV/radio commercial, or may be much longer, e.g., 30 minutes, as is the case with the "infomercial."

Brief Summary Text (34):

d) The RU includes circuitry that accepts the vendor's host computer download of a station number to a preferred "last ordered from" button, if such vendor is authorized by the RU's provider and also downloads the correct date and time.

Detailed Description Text (16):

As indicated above, the Remote Unit 212 includes a memory. The RU's memory, shown and described in more detail below in conjunction with FIG. 10, may contain, but is not limited to: an RU Serial Number, a User Purchase history, a User phone number (s), a User Address, messages for the LCD display, a Product Pick Table (Product #, Phone # and Station Call Letters), a Viewing Log (Channels and Times), passwords for modification authorizations, and/or preferred TV channel numbers. Some of the above information may alternatively be stored in a "user file" maintained at the order-taking or other remote computer under the RU Serial Number.

Detailed Description Text (23):

The first major subsection is a memory controller 2. The memory controller subsection 2 includes a read-only-memory (ROM) 21, which holds program memory; a static random access memory (SRAM) 22, which stores user, marketing and TV information and the viewing log; and a serial electrical erasable read only memory (EEROM) 23, which holds product purchasing history information and a token-to-vendor telephone number table.

Detailed Description Text (39):

The most critical item in the DTMF Pick Record is the fulfillment-computer's phone number or phone number token (a phone number token is, effectively, an abbreviated phone number or code, similar to a speed dialing number). If the phone number or token is received, then the RU does not notify the user of an error (block 68). This is because the phone number or token, when received, allows a phone connection to be made with the order-taking computer. Once such connection is made, a sales clerk at the Vendor's order-taking site can prompt the user for any other missing data associated with the order.

Detailed Description Text (40):

Ambient noise or poor signal levels or quality can limit the ability of the RU device to correctly receive the DTMF data. In a preferred embodiment, the actual data capture comprises at least one of the following groups. A first group that includes: (1) a 2-digit phone number token to call to order the product, (2) the 4 or 6 digit product ID or SKU code, (3) a check (parity) code, (4) the 4 character (8 DTMF tones) call sign of the TV station, and (5) an identical 2-digit phone number token, in reverse order, used as a check code. Or, a second group that includes: (1) an asterisk followed by a 10-digit phone number to call to order the product, (2) a check code, (3) the 4 or 6 digit product ID or SKU code, (4) the 4 character call sign of the TV station, (5) a second identical phone number in reverse order, used as a check code.

Current US Original Classification (1):
705/26

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L55: Entry 1 of 3

File: USPT

Nov 5, 2002

US-PAT-NO: 6477508

DOCUMENT-IDENTIFIER: US 6477508 B1

TITLE: System and apparatus for broadcasting, capturing, storing, selecting and then forwarding selected product data and viewer choices to vendor host computers

DATE-ISSUED: November 5, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lazar; Clifford W.	Los Angeles	CA	90034-1053	
Meadows; Paul M.	La Canada Flintridge	CA	91011-2335	

APPL-NO: 09/ 035649 [\[PALM\]](#)

DATE FILED: March 5, 1998

PARENT-CASE:

This application claims the benefit of U.S. provisional application Ser. No. 60/062,948, filed Oct. 9, 1997.

INT-CL: [07] [G06 F 17/00](#)

US-CL-ISSUED: 705/26; 725/110, 725/141

US-CL-CURRENT: [705/26](#); [725/110](#), [725/141](#)

FIELD-OF-SEARCH: 348/8, 348/12, 348/13, 348/17, 348/906, 348/734, 348/552, 348/10, 348/5.5, 455/5.1, 455/4.2, 455/6.2, 455/6.3, 705/26, 725/141, 725/153, 725/110, 725/112, 725/133, 725/134

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

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	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	4107735	August 1978	Frohbach	358/84
<input type="checkbox"/>	4736094	April 1988	Yoshida	235/379
<input type="checkbox"/>	4802022	January 1989	Harada	358/349
<input type="checkbox"/>	4890108	December 1989	Dori et al.	341/176
<input type="checkbox"/>	5128752	July 1992	Von Kohorn	358/84
<input type="checkbox"/>	5138649	August 1992	Krisbergh et al.	379/56

<input type="checkbox"/>	<u>5227874</u>	July 1993	Von Kohorn	358/84
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<input type="checkbox"/>	<u>5285278</u>	February 1994	Holman	358/142
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<input type="checkbox"/>	<u>5382970</u>	January 1995	Kiefl	348/1
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<input type="checkbox"/>	<u>5457807</u>	October 1995	Weinblatt	455/2
<input type="checkbox"/>	<u>5469206</u>	November 1995	Strubbe et al.	348/7
<input type="checkbox"/>	<u>5475585</u>	December 1995	Bush	364/401
<input type="checkbox"/>	<u>5497185</u>	March 1996	Dufresne et al.	348/2
<input type="checkbox"/>	<u>5500681</u>	March 1996	Jones	348/473
<input type="checkbox"/>	<u>5504519</u>	April 1996	Remillard	348/7
<input type="checkbox"/>	<u>5508731</u>	April 1996	Kohorn	348/1
<input type="checkbox"/>	<u>5515270</u>	May 1996	Weinblatt	364/405
<input type="checkbox"/>	<u>5552837</u>	September 1996	Mankovitz	348/734
<input type="checkbox"/>	<u>5570295</u>	October 1996	Isenberg et al.	379/90.01
<input type="checkbox"/>	<u>5574963</u>	November 1996	Weinblatt et al.	455/2
<input type="checkbox"/>	<u>5581800</u>	December 1996	Fardeau et al.	455/2
<input type="checkbox"/>	<u>5848399</u>	December 1998	Burke	705/27
<input type="checkbox"/>	<u>5872588</u>	February 1999	Aras et al.	348/1
<input type="checkbox"/>	<u>5872589</u>	February 1999	Morales	348/13
<input type="checkbox"/>	<u>5995155</u>	November 1999	Schindler et al.	348/461

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
0776132	May 1997	EP	
0788710	February 1999	EP	
409305656	November 1997	JP	
WO 9613119	February 1996	WO	

OTHER PUBLICATIONS

Derwent-ACC-No.2001-181051; Knowlton, K.C. et al., Oct. 2000.*
 Dialog File 636, Access No. 02693699, M2 Presswire, "General Instrument To Incorporate Zing Technology", Apr. 10, 1995.

ART-UNIT: 2761

PRIMARY-EXAMINER: Trammell; James P.

ASSISTANT-EXAMINER: Elisca; Pierre E.

ATTY-AGENT-FIRM: Fitch, Even, Tabin & Flannery

ABSTRACT:

A Broadcast Marketing System (BMS) creates, transmits, captures, stores and forwards selected home shopping product ordering information in a manner that increases the likelihood that a TV or radio viewer/listener will order a product promoted on a direct response commercial. A Broadcast Provider transmits an enhanced broadcast commercial that is coded with information that identifies the product being featured in the commercial, a telephone number of an order-taking computer, and the call letters of the broadcast station that broadcasts the enhanced commercial. The enhanced commercial is received by a TV or radio or other receiver and broadcast for viewing/listening by a user. The user is provided with a specially-configured Remote Unit (RU), resembling a typical TV remote control unit. The RU allows the user to select for purchase those products or services described in the enhanced commercial by simply depressing a button on a keypad of the RU during broadcast of the enhanced commercial.

6 Claims, 25 Drawing figures

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L55: Entry 2 of 3

File: USPT

Feb 20, 2001

DOCUMENT-IDENTIFIER: US 6191780 B1

TITLE: Customizable multimedia segment structures

Abstract Text (1):

An electronic devices executes from memory an advertising multimedia segment structure that includes a command segment storing multimedia commands that in turn invoke multimedia effects and that is supported by a definition segment that invokes the command segment. The definition segment also includes argument definitions for the tokenized arguments in the command segment. The command segments are protected against alteration by encryption, while the definition segments are alterable to provide locally customized advertisements in accordance with the tokenized arguments in the command segments. A library of downloadable command segments provides predefined advertisements, displays, and the like for the electronic device.

Application Filing Date (1):

19980325

Brief Summary Text (14):

Another object of the present invention is to provide predefined advertisements that include literal arguments and tokenized arguments. The present invention may protect files referenced by literal arguments with encryption to prevent substitution or modification by unauthorized personnel.

Brief Summary Text (15):

The present invention provides a multimedia segment structure defining customizable multimedia presentations. The multimedia segment structure includes at least one MAC segment with multimedia commands invoking multimedia effects. At least one of the multimedia commands includes a tokenized argument. The multimedia segment structure also includes at least one DAT segment including at least one command invoking the MAC segment. The DAT segment also includes one or more argument definitions corresponding the tokenized arguments used in the MAC segments. Thus, the DAT segment may customize a multimedia display by changing the value of the tokenized argument.

Brief Summary Text (16):

The commands in the MAC segment, or the MAC segment as a whole may be protected against alteration by encryption and/or password protection. The tokenized arguments thereby provided customization of an advertisement in the DAT segment while basing the advertisement on an underlying and unalterable structure defined in the MAC segment. As an example, the DAT segment may define the token PICT1 as "jukebox_add.jpg" or as "dart_game_add.jpg" to produce a customized advertisement relating to jukeboxes or dart games, respectively.

Drawing Description Text (3):

FIG. 2 shows an example of a MAC segment that defines an underlying template for an advertisement and a DAT segment that invokes the MAC segment as well as defines a token used in the MAC segment.

Detailed Description Text (3):

A central management system (not shown) may communicate with each jukebox 13 via a transmission link or communications interface. For example, the central management system and each jukebox 13 may use the modem 19 to maintain serial communication on the communications interface. The communications interface may be a wire system such as public or private telephone lines or the like. However, the modems 19 may be replaced with RF (radio frequency) transceivers and associated antennas, a floppy disk drive, or a serial/parallel/network connection for direct communication with, for example, a laptop computer.

Detailed Description Text (9):

Note that the commands accept one or more arguments, either in literal form (for example, specifically naming text, XY locations, or filenames as in "arachnid.bmp"), or in a tokenized form in which identifiers (for example, TEST) are used as placeholders for an actual argument. The objects referenced by a literal argument (including graphics files, sound files, and animation files, for example) may be encrypted to prevent substitution or modification by unauthorized personnel.

Detailed Description Text (10):

The tokenized arguments may be flagged in the control segment using non-alphanumeric characters (e.g., the caret () symbol). Thus, TEXT TEST in FIG. 2 may be interpreted by the jukebox 13 as a reference to a definition for the token TEST in a supporting segment (for example, the definition segment 204). The supporting definition segment may then, for example, define TEST as "This is a test message."

Detailed Description Text (11):

The supporting DAT segment may be modified by route operators to create custom advertisements simply by changing the values of the tokenized arguments in a definition segment. A DAT segment is not always necessary, however. If the underlying advertisement definition in a MAC segment does not contain any tokens, or cannot otherwise be modified (e.g., due to encryption), then the play sequence may indicate that the MAC segment should be played directly (without executing a definition segment first).

Detailed Description Text (13):

The jukebox 13 also reads any definitions provided in the DAT segment 204. The jukebox 13 thus assigns the text "This is a test message." to the token TEST. When the jukebox invokes the MAC segment 202, the jukebox sets the drawing color to 254 (which may be an absolute color number or an index into a color table), draws a circle, draws a line through the circle, changes font to font number 2 (which may correspond to any predefined font stored in the jukebox 13), sets up a centering text box bounded by 100, 100 and 540, 150, and displays text corresponding to the token TEST, defined in the DAT segment 204 as "This is a test message."

Detailed Description Text (14):

MAC and DAT segments containing predefined advertising templates and customized token definitions may be stored in each electronic device, may be transmitted by the central management system to the electronic device periodically, or may be transferred to the electronic device with a floppy disc, network connection, or serial/parallel port connection. Similarly, the graphics, text, and the like that support the advertisements may be stored in the electronic device or transferred to the electronic device by the methods listed above. A catalog of MAC segments defining a set of predefined advertisements may be entrusted to route operators or other intermediate distribution personnel who are responsible for generating modified DAT segments defining modified advertisements based on an underlying MAC segment in the catalog.

Detailed Description Text (15):

There are many instances in which advertisements may benefit from customization

using DAT segments. For example, a particular electronic device installed in a bar may need to display customized advertisements relating to local pizza delivery services. A route operator may then choose a predefined pizza advertisement control file from a catalog of MAC files. Because the predefined control file would typically not include the correct name, address, or phone number for the local pizza service, the route operator may change token values in an associated definition file to customize the advertisement for Tony's Pizza, for example. The resulting customized pizza advertisement may thereby use predefined graphics files referenced by the control file, while including customized text for the name, address, and/or phone number for the local pizza establishment. As another example, a customized advertisement may provide job listings for local employment agencies. Thus, a definition file may change the value of tokens provided in an underlying control file, for instance, to add a graphic for the employment agency logo, to add text for the employment agency's name and slogan, and to add several lines of text listing the actual job openings.

Current US Cross Reference Classification (2):
705/27

CLAIMS:

1. An electronic device for executing a customized advertisement multimedia display, the electronic device comprising:

a memory storing a multimedia segment structure, the multimedia segment structure comprising:

a. a control segment implementing a predefined advertisement and comprising at least one multimedia command invoking at least one multimedia effect, the multimedia command including a placeholder tokenized argument; and

b. a definition segment comprising a segment association invoking the control segment and an argument definition of the tokenized argument, the argument definition customizing the predefined advertisement for local display;

the memory also storing a play sequence listing the definition segment and thereby determining when the multimedia segment structure is executed;

and

a processor for executing the multimedia segment structure in accordance with the play sequence.

11. The electronic device of claim 1, wherein the tokenized argument is flagged using non-alphanumeric characters.

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L55: Entry 2 of 3

File: USPT

Feb 20, 2001

US-PAT-NO: 6191780

DOCUMENT-IDENTIFIER: US 6191780 B1

TITLE: Customizable multimedia segment structures

DATE-ISSUED: February 20, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Martin; John R.	Rockford	IL		
Rentmeesters; Charles D.	Madison	WI		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Arachnid, Inc.	Rockford	IL			02

APPL-NO: 09/ 047653 [\[PALM\]](#)

DATE FILED: March 25, 1998

INT-CL: [07] [G06 F 17/00](#)

US-CL-ISSUED: 345/302; 707/104, 705/15, 705/27

US-CL-CURRENT: [715/500.1](#); [705/15](#), [705/27](#)

FIELD-OF-SEARCH: 707/104, 345/302, 705/15, 705/27

PRIOR-ART-DISCLOSED:

U. S. PATENT DOCUMENTS

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	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	5355302	October 1994	Martin et al.	364/410
<input type="checkbox"/>	5401033	March 1995	Lychock, Jr.	273/371
<input type="checkbox"/>	5640560	June 1997	Smith	395/615
<input type="checkbox"/>	5640590	June 1997	Luther	345/302
<input type="checkbox"/>	5680619	October 1997	Gudmundson et al.	395/701
<input type="checkbox"/>	5682326	October 1997	Klinger et al.	345/302
<input type="checkbox"/>	5761655	June 1998	Hoffman	707/4
<input type="checkbox"/>	5892966	April 1999	Petrack et al.	712/36

<input type="checkbox"/>	<u>5941953</u>	August 1999	Bergmann et al.	709/234
<input type="checkbox"/>	<u>5953005</u>	September 1999	Liu	345/302

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
2170943	August 1986	GB	
WO 97/04394	February 1997	WO	
WO 97/09708	March 1997	WO	

OTHER PUBLICATIONS

Wall, et al., "An Overview of Perl," XP-002126585 O'Reilly & Associates (1996).
Bulterman, Dick C. A. "Embedded Video in Hypermedia Documents: Supporting
Integration and Adaptive Control." ACM Transactions on Information Systems, vol.
13, No. 4. Association for Computing Machinery. .COPYRGT.1995. pp. 440-470.
Printout of Java.TM. code for "connect4" applet. Found online at
<http://javaboutique.internet.com>. Upload date Dec. 1, 1996.

ART-UNIT: 276

PRIMARY-EXAMINER: Feild; Joseph H.

ASSISTANT-EXAMINER: Perkins; Michael J.

ATTY-AGENT-FIRM: McAndrews, Held & Malloy, Ltd.

ABSTRACT:

An electronic devices executes from memory an advertising multimedia segment structure that includes a command segment storing multimedia commands that in turn invoke multimedia effects and that is supported by a definition segment that invokes the command segment. The definition segment also includes argument definitions for the tokenized arguments in the command segment. The command segments are protected against alteration by encryption, while the definition segments are alterable to provide locally customized advertisements in accordance with the tokenized arguments in the command segments. A library of downloadable command segments provides predefined advertisements, displays, and the like for the electronic device.

12 Claims, 2 Drawing figures

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L55: Entry 3 of 3

File: USPT

Oct 19, 1999

DOCUMENT-IDENTIFIER: US 5970474 A

TITLE: Registry information system for shoppers

Application Filing Date (1):

19970424

Brief Summary Text (15):

Preferably, the interface between the product selection device, data processor, registry retrieval device, and point-of-sale data input device at each site is provided by a token ring local area network system and a radio frequency local area network. Also preferably, the interface between the data processor at each site and the host computer is a wide-area-network.

Detailed Description Text (3):

Referring to the drawings, FIG. 1 illustrates an inter-site product information system for selecting, monitoring and purchasing of products in a plurality of retail establishments. As illustrated, a first store location 10 has a local area network 12 for interfacing with a gift registry kiosk 14, a product selection device 15, a point-of-sale data input device 16, and an in-store data processor 18. Similarly, a second store location 20 has a local area network 22 for interfacing with a gift registry kiosk 24, a product selection device 25, a point-of-sale data input device 26, and an in-store data processor 28. The two local area networks 12, 22 are in operable communication with a remote host computer 30 through a wide area network 32. Preferably, the local area networks 12 and 22 are token-ring type networks using existing store-level protocols and standards. Although only two store locations or retail sites 10 and 20 are shown, it will be appreciated that any number of sites can be incorporated in the network, and retail stores worldwide can be in operable communication in accordance with the present invention.

Detailed Description Text (6):

The product selection devices 15 and 25 identify desired items selected by a registrant, such as wedding or birthday gifts, and route the codes of the desired items to a registry database on the host computer 30. Preferably, the product selection devices 15 and 25 are the devices made by Telxon Corporation and sold as Model No. 960SL. These devices are configured as portable, handheld systems to allow the registrant to move about the retail establishments to select the desired items. The handheld systems include an input device in the form of an optical scanner and an output device in the form of a radio-frequency transmitter. The scanner is operable to detect bar codes on the desired items, and the transmitter is an RF communications card, preferably a token-ring card capable of communicating with the data processors 18, 28 through the local area networks 12 and 22. Thus, the registrant can scan the bar codes of desired items to automatically transmit the selection data to the data processor via radio-frequency communication.

Detailed Description Text (17):

It will be appreciated that the registrant may choose to change registry information after they have registered. Any of the original information may be modified by the registrant, registered items may be deleted, or the

requested/received quantities may be modified, by entering the registry ID and password at the gift registry kiosk. Moreover, additional items may be added by using the scanning process discussed above. Thus, one advantage of the present invention is that modifications to the gift registry database are made in "real time," thereby ensuring that the latest information is always provided to a purchasing customer desiring to purchase a gift for the registrant.

Current US Original Classification (1):

705/27

Current US Cross Reference Classification (2):

705/26

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L16: Entry 1 of 2

File: USPT

Feb 11, 1997

US-PAT-NO: 5602743

DOCUMENT-IDENTIFIER: US 5602743 A

TITLE: Method for data input into a postage meter machine, arrangement for franking postal matter and for producing a franking design respectively allocated to a cost center

DATE-ISSUED: February 11, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Freytag, Claus	Berlin			DE

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Francotyp-Postalia AG & Co.	Birkenwerder			DE	03

APPL-NO: 08/ 444266 [PALM]

DATE FILED: May 18, 1995

PARENT-CASE:

This application is a continuation of application Ser. No. 08/181,408, filed Jan. 13, 1994, which issued as U.S. Pat. No. 5,490,077.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DE	43 02 097.6	January 20, 1993
DE	43 12 894.7	April 16, 1993

INT-CL: [06] G07 B 17/00

US-CL-ISSUED: 364/416.18; 235/375

US-CL-CURRENT: 705/408; 235/375

FIELD-OF-SEARCH: 235/375, 235/380, 235/381, 364/464.02

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

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PAT-NO

ISSUE-DATE

PATENTEE-NAME

US-CL



3635297

January 1972

Salava

177/177

<input type="checkbox"/>	<u>4122532</u>	October 1978	Dlugos et al.	364/900
<input checked="" type="checkbox"/>	<u>4138735</u>	February 1979	Allocca et al.	364/900
<input type="checkbox"/>	<u>4506330</u>	March 1985	Dlugos	364/466
<input type="checkbox"/>	<u>4802218</u>	January 1989	Wright et al.	380/380
<input type="checkbox"/>	<u>4812994</u>	March 1989	Taylor et al.	364/464.02
<input type="checkbox"/>	<u>4831554</u>	May 1989	Storace et al.	364/464.02 X
<input type="checkbox"/>	<u>4868757</u>	September 1989	Gil	364/464.02
<input type="checkbox"/>	<u>4914606</u>	April 1990	Vermesse	364/464.02 X
<input type="checkbox"/>	<u>4933849</u>	June 1990	Connell et al.	364/400
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<input type="checkbox"/>	<u>4980542</u>	December 1990	Jackson et al.	235/375
<input type="checkbox"/>	<u>5111030</u>	May 1992	Brasington et al.	235/375
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<input type="checkbox"/>	<u>5367150</u>	November 1994	Kitta et al.	235/380
<input type="checkbox"/>	<u>5388248</u>	February 1995	Robinson et al.	235/380 X
<input type="checkbox"/>	<u>5397883</u>	March 1995	Miyashita	235/380 X
<input type="checkbox"/>	<u>5442704</u>	August 1995	Holtey	235/380 X
<input type="checkbox"/>	<u>5461222</u>	October 1995	Haneda	235/375 X

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
0230658	August 1987	EP	
0373971	January 1991	EP	
0405357	January 1991	EP	
3206539	September 1983	DE	
3809795	January 1992	DE	
4033164	April 1992	DE	

ART-UNIT: 244

PRIMARY-EXAMINER: Cosimano; Edward R.

ATTY-AGENT-FIRM: Hill, Steadman & Simpson

ABSTRACT:

A method for data entry into a postage meter machine before the initiation of a selected printer function, an arrangement for franking postal matter and for producing a franking image respectively allocated to a cost center include automatic modification of the most recent status of stored data contents in a postage meter machine for the setting thereof within a time window following the switch-on on the basis of a first data carrier and/or automatic entry of an

accounting number for the cost center of the user and/or of a printer function or the number of a printer function into a memory area of a memory of the postage meter machine on the basis of a further data carrier. The data carriers may be chip cards. Data for the chip card number, for the cost center number and for the design number are read out in the unprotected memory area or, after automatic password rendering, from the protected memory area of the chip card by the postage meter machine and are used in the postage meter machine for setting the cost center and the associated advertising design.

6 Claims, 15 Drawing figures

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L16: Entry 1 of 2

File: USPT

Feb 11, 1997

DOCUMENT-IDENTIFIER: US 5602743 A

TITLE: Method for data input into a postage meter machine, arrangement for franking postal matter and for producing a franking design respectively allocated to a cost center

Abstract Text (1):

A method for data entry into a postage meter machine before the initiation of a selected printer function, an arrangement for franking postal matter and for producing a franking image respectively allocated to a cost center include automatic modification of the most recent status of stored data contents in a postage meter machine for the setting thereof within a time window following the switch-on on the basis of a first data carrier and/or automatic entry of an accounting number for the cost center of the user and/or of a printer function or the number of a printer function into a memory area of a memory of the postage meter machine on the basis of a further data carrier. The data carriers may be chip cards. Data for the chip card number, for the cost center number and for the design number are read out in the unprotected memory area or, after automatic password rendering, from the protected memory area of the chip card by the postage meter machine and are used in the postage meter machine for setting the cost center and the associated advertising design.

Application Filing Date (1):

19950518

Brief Summary Text (5):

A postage meter machine is utilized for franking postal matter and is equipped with at least one input means, particularly with a chip card write/read unit, an input/output control means and with an output means.

Brief Summary Text (6):

Chip cards are known which comprise a plurality of non-volatile memories, or separately accessible memory areas and a microprocessor in order to transmit data representing different types of information into the postage meter machine and in order to read data out of the postage meter machine.

Brief Summary Text (7):

A postal fee accounting system disclosed in U.S. Pat. No. 5,111,030, corresponding to German OS 39 03 718 includes a write/read unit for chip cards that is connected to a postage meter machine via a control unit. Data about postage meter machine use are written into the chip card, this data being read out later with a personal computer for accounting.

Brief Summary Text (8):

German OS 40 33 164 discloses a metered postage tape system having chip card write/read unit in a common housing. Two memory areas exist in the non-volatile data memory of the chip card, the first memory area containing the current postage credit data and the second memory area containing the data for an individual advertising design (advert mark). The chip card assigned to a user can also be used in a known way for loading or recharging the postage meter machine and has a transport and accounting function for the exchange of data for fee accounting as

well as a reloading function for an advertising design. The second memory area for the individual advertising design can be selected in the chip card separately from the first memory area for the postage credit and is only read when needed.

Brief Summary Text (9):

It would be desirable to additionally store accounting data (date, number and value of impressions) in the chip card in order to be able to undertake a chronologically following accounting with a personal computer. However, the storage space of this known chip card is completely occupied by the additional image data, so that no further data can be stored.

Brief Summary Text (10):

This solution is also time-consuming because, after the entry of an identification code for each user, an individual advertising design must be newly loaded from the chip card into the processor system (postage meter) via the serial interface and the old, stored, individual advertising design in the processor system must be replaced by a new, individual advertising design. The data exchange procedure via a serial interface already lasts longer than the data exchange via a parallel interface. The advertising design can thus not be constantly reloaded for every impression. This solution is thus ineffective given a constant or frequent change of users.

Brief Summary Text (11):

Due to the limited storage space that is available on a chip card, a plurality of chip cards simultaneously plugged into a plurality of write/read units would again have to be employed for further data to be entered, this further increasing the time consumed in a data read-out associated with every printing event.

Brief Summary Text (12):

U.S. Pat. No. 4,812,994 discloses a system intended to prevent unauthorized access to use the postage meter machine by inhibiting the postage meter machine given the absence of an identification signal ID and/or after the passage of a predetermined time interval without use. The ID signal can be entered by a chip card, by a personal computer, via modems or can be manually entered into the postage meter machine. The postage meter machine is enabled after a positive comparison with a user identification signal stored in the postage meter machine.

Brief Summary Text (13):

In the aforementioned solutions, the postage meter machines are inhibited for use until the chip card is plugged into a corresponding write/read unit, as a result of which the authorization of the user is initiated.

Brief Summary Text (14):

WO93/05482 corresponding to German OS 41 29 302 proposes a modified solution for incrementing the fee credit in the credit balance memory of postage meter machines on the basis of a chip card that carries a reloading credit that, when subsequently erased, can in turn be removed. In another version, the credit stored in the chip card is debited step-by-step. However, no further data can be fetched from the chip card. A pluggable EPROM is introduced into a permanently installed plug-in socket for the postal fees (postage fee table).

Brief Summary Text (22):

As much data as would be desirable can definitely not be currently stored in a single chip card. Given an increased data processing outlay, however, it would be possible to reduce the total data to a "necessary" data set and to store only the necessary data set in a chip card.

Brief Summary Text (23):

Another way of bypassing the limited storage capacity present on a chip card would be to employ a plurality of chip cards simultaneously plugged into write/read

units.

Brief Summary Text (24):

U.S. Pat. No. 4,802,218 discloses an automatic transmission system having a plurality of slots for chip cards that, in addition to employing a chip card for recharging credits and for accounting, whereby the postage fee value to be printed is subtracted from the credit, also simultaneously employs a further chip card for a postage fee table with whose assistance the aforementioned postage fee value is calculated. As a result of the plurality of write/read units, however, the apparatus becomes too large and too expensive.

Brief Summary Text (25):

On the other hand, accounting (debiting) data are already stored in the postage meter machine, but heretofore must additionally be stored in a chip card in order to transport the accounting data to a personal computer equipped with a chip card reader and to print out an accounting log via a printer connected thereto. However, variable printing formats can be produced with an electronic printer in postage meter machines.

Brief Summary Text (32):

A further object is to provide for data entry and for supplying postage meter machines with an arbitrary amount of current data given low cost, employing chip cards for a postage meter machine having an electronic printer means.

Brief Summary Text (35):

The invention is based on the concept of making a set of chip cards respectively carrying different data available to the user and to use this set for a sequential setting of the postage meter machine dependent on the cost allocation accounts, via a single chip card write/read unit.

Brief Summary Text (36):

The physical possession of a chip card is comparable to providing the user with a key. Compared to acquiring an access authorization for functions of the postage meter machine without chip cards only on the basis of a password, obtaining the password surreptitiously becomes meaningless and operating errors such as, for example, forgetting to log-off after the use of the postage meter machines, are avoided with a chip card.

Brief Summary Text (37):

Proceeding on the basis of the fact that the user can employ a plurality of specific chip cards for the respectively intended thermal transfer printing function or, respectively, postage meter machine function, a method is inventively proposed wherein the chip card that loads operations that do not reduce the credit need not remain in the machine for the implementation of these operations.

Brief Summary Text (38):

The invention is also based on the consideration that the operating system of the postage meter machine--in combination with a communication and operating system of the card--is capable of gaining access to the memory of the chip card and to read its contents when one of the users of the postage meter machine inserts his or her personal chip card into the chip card write/read unit.

Brief Summary Text (42):

The invention permits utilization of a personal chip card of a user for setting an advertising design that is dependent on cost allocation account. Identification of the cost allocation account and of the advertising design via the keyboard of the postage meter machine, which have heretofore been necessary, are thus advantageously eliminated.

Brief Summary Text (43):

In accordance with the invention, no advertising design is loaded from the chip card and a user-entered identification code is not a prerequisite for reading data that select the advertising design from the chip card. One advantage is that a user who has not been legitimized by the possession of a chip card no longer has any possibility at the postage meter machine of fetching data of other meters in response to pressing a button.

Brief Summary Text (45):

The postage meter machine is equipped with a non-volatile memory for a plurality of advertising designs respectively allocated to the cost allocation account of the customer and with a chip card write/read unit and enables a more frequent change of cards for a plurality of users. An existing automatic franking unit, for example a postage meter machine available from Francotyp-Postalia, can thus be equipped with a known chip card write/read unit.

Brief Summary Text (46):

The interface motherboard of the chip card write/read unit is connected to the serial interface of the postage meter machine. The contacts include at least six contacts and the data exchange between the unprotected and/or the protected card memory area and a non-volatile memory of the program memory means of the postage meter machine is automatically serially undertaken within the framework of a communication protocol as soon as the chip card has been inserted into the plug-in slot.

Brief Summary Text (47):

In a preferred embodiment, the chip card primarily serves for the customer-dependent entry of data and possibly for accounting data as well.

Drawing Description Text (2):

FIG. 1 is a block circuit diagram of a postage meter machine equipped with a chip card write/read unit constructed in accordance with the principles of the present invention.

Detailed Description Text (10):

In a preferred embodiment, the data carriers are chip cards that are brought one at a time into contact with the interface 20, within the preferred embodiments is a chip card write/read unit.

Detailed Description Text (11):

In the embodiment shown in FIG. 1, an integrated chip card sets ICCA and ICCB are employed as the first and second data carriers 10 and 13. Each of the chip cards contains its own memory having the fetchable data and/or flags for reloading auxiliary functions and auxiliary information into the postage meter machine or for the setting thereof. The method of the invention making use of the chip cards is characterized by the following steps.

Detailed Description Text (12):

An integrated chip card ICCA set for the automatic reloading of data and/or flags is plugged into the chip card reader (I/O unit 20) within a time window following the turn-on of the machine so that the most recently stored setting of the postage meter machine can be modified. The chip card from the set ICCA is released and can be withdrawn after an indication (such as by means of the output unit 4) of the executed reloading event of data from the chip card for configuring the postage meter machine. An integrated chip card for users from the set ICCB with the customer information and the selected printing function is plugged into the I/O unit 20. A selected printing function is then initiated.

Detailed Description Text (13):

A first set of data contents a1 through a14 respectively carried by country-associated configuring chip cards ICCA1 through ICCA14 of the set ICCA, which are

automatically read in dependent on existing conditions comprise:

Detailed Description Text (28):

A second set of the following data contents b1 through b9 can be fetchably contained in a plurality of user chip cards ICCB1 through ICCB9 of the set ICCB.

Detailed Description Text (38):

The aforementioned data contents a1 through a14 can be fetchably contained either in a corresponding plurality of configuring chip cards ICCA1 through ICCAi that is equal in number to the difficult data contents or can be fetchably contained in combination with one another in a smaller plurality of configuring chip cards ICCA1 through ICCAi.

Detailed Description Text (39):

It is also provided that the data contents b1 through b9 are fetchably contained in a plurality of user chip cards ICCB1 through ICCBi equal in number to the plurality of data contents or are fetchably contained in a lower plurality of user chip cards ICCB1 through ICCBi, whereby at least some of the data contents are combined with one another stored on one chip card.

Detailed Description Text (40):

In a first version of the method illustrated by the flowchart of FIG. 2, a setting of the postage meter machine with a selected, specific user chip card B (from set ICCB) is undertaken after the machine is first configured with a selected, specific configuring chip card A (from set ICCA).

Detailed Description Text (41):

A plurality of such chip cards ICCA1 through ICCAi can be employed for specifically configuring the postage meter machine. The desired setting is undertaken with a selected, specific chip card ICCAi within a specific time window, i.e. while this is being placed in operation. "Configuring the machine" means entered all setting possibilities which influence the operation of the postage meter machine. For example, this could be setting programming stages 100 and 101 respectively for timing control and sequential control. In another version, these can be set for use as programming or memory means, i.e. specific types of control for the processing unit and/or flags whose respective causes the status activation or deactivation program routines. These collaborate with the print controller and the central processing unit 5a.

Detailed Description Text (42):

Simultaneously with the machine functions that can be configured by such programs and/or flags, current information is also accepted into the postage meter machine. The machine functions and/or information are stored in the chip card, preferably in table form.

Detailed Description Text (43):

The manner by which data are sequentially entered into a postage meter machine using two chip cards which are successfully brought into contact with the chip card write/read unit 20 is shown in FIG. 2 in an exemplary embodiment directed to the aforementioned, first version. The setting of the postage meter machine which can thus be achieved is recited in an easily understandable form on the surface of the chip card and is displayed by the display unit (i.e., output 4) of the postage meter machine after being loaded into the postage meter machine. The configuring that is achieved is illustrated for the user in plain representation and/or with symbols before the old chip card is pulled and the next chip card is plugged into the slot.

Detailed Description Text (45):

A check (not set forth in greater detail) of the postage meter machine functions and an initialization in step 121 ensues after the start (power-up) 120. A check is

carried out in the following step 122 to determine whether the chip card A has been plugged in. If this has not yet ensued, a time window is begun in a step 123 and a return is then undertaken to the initialization routine 121. After the lapse of a predetermined chronological duration without a chip card A having been plugged in, a jump is made to step 129. Otherwise, a jump from step 122 to step 124 ensues, wherein the authorization is checked. In the event a chip card is recognized which is not authorized for data entry into a corresponding postage meter machine, a return back to the initialization routine 121 by the postage meter machine ensues in step 125 after a registration of the unsuccessful data entry attempt that has taken place. Given a positive check of the authorization, the predetermined data exchange ensues in step 126. A check is carried out in the following step 127 to determine whether the data input has been ended. When the data entry by the chip card A has ended, a message "card A OUTPUT" is displayed with the output unit 4 in step 128. Otherwise, if the data entry has not ended, a return back is made to step 126 in order to continue the data exchange. Following step 128--when the chip card A has been removed--, the display "INPUT CARD B" ensues in step 129 until the check in the following step 130 has shown that the chip card B has been plugged in. The authorization is then checked in step 131. When the chip card B is not plugged in, or given an unauthorized chip card B (and possibly following the registration in step 133), a return back is always undertaken to step 129 and the postage meter machine is not operational. Given an authorized chip card B that has been plugged in, a predetermined data exchange ensues in step 134. As long as it has been found in step 135 that the data entry has ended, a return back is undertaken to step 134. When the data input has ended, the input number of the cost allocation account, or the number of the input printing function is displayed in step 136. The transition to the system management routine (step 200) subsequently ensues. The steps 130, 131 and 134 are set forth in greater detail farther below--in the flowchart shown in FIG. 5.

Detailed Description Text (47):

It is known to store auxiliary functions and tables, particularly a postage fee table, in a chip card (German OS 42 13 278). Such a chip card is inserted into the plug-in slot 26 (See FIG. 7) of the postage meter machine. After the unit has been switched on, the data content carried by the card a3 and a4 (for example, above) is loaded into the memory module 3 of the postage meter machine within a time window. As a reaction to the request "OUTPUT CARD A" that can read on the output unit (display) 4, the chip card ICCA_i is removed. The readable request "INPUT CARD B" now appears on the output unit 4.

Detailed Description Text (48):

The user chip card ICCB_j respectively containing one of the aforementioned data contents b1 through b9 is selected by the user and is introduced into the slot of the postage meter machine so that the printer of the postage meter machine carries out the desired printing function.

Detailed Description Text (49):

In accordance with the invention, only this one specific user chip card, which is plugged in last, can remain constantly plugged in for the execution of printing functions. Additionally, the cost allocation account number may be entered into the postage meter machine with a user-associated chip card.

Detailed Description Text (53):

A specific configuring chip card, such as ICCA₁, is plugged into the write/read unit and the postage meter machine is switched on. As a result, an automatic reloading with data for the adaption of the postage meter machine is undertaken and the most recently set cost allocation account number (KST number) is erased. The postage meter machine can now be set to a corresponding print function of "franking".

Detailed Description Text (54):

A specific user chip card, for example ICCB1, is plugged in for reloading the cost allocation account number (KST number) and can be in turn pulled when the display of the cost allocation account number (KST number) and the number of the selected print function has ensued.

Detailed Description Text (55):

In a further version shown in FIG. 3, only one user chip card ICCB1 is employed per user. Automatic and manual entries of password, PIN code or name additionally ensue for fetching the second data contents corresponding to b2 through b9.

Detailed Description Text (61):

In a further exemplary embodiment, auxiliary functions and/or auxiliary information can be loaded into the postage meter machine with a data carrier 13, preferably with a user chip card ICCBj. Standard jobs are often carried out; for example, only standard letters are to be franked, so that one or more extensive data contents need not be reloaded. No chip card ICCA is then plugged in within the time window 123.

Detailed Description Text (62):

A part of the aforementioned, first data contents a4 through a14 can--as shown in FIG. 6--likewise be stored in table form in the user chip card ICCBj, these being automatically entered into the memory 3 of the postage meter machine after step 138 (counter reset $N=0$) under predetermined conditions with step 139 (automatic input of PIN code, name and/or password by postage meter) and step 132 (user identification=YES), and step 134 (data exchange) or if user identification=NO, then branch to step 140 (counter is incremented $N=N+1$), then proceed to step 141 and if $N<3$, return to step 139 and if $N>3$, go to registration step 142, error display step 143 and stop at step 144. A manual input of PRN code or password can thereby be required as an additional condition with step 137 after step 135, if the data input is not yet completed.

Detailed Description Text (67):

Under the condition that the dispatching country for which the postage meter machine is legal and the advertising designs that are allocated to the cost allocation account are permanently prescribed and stored in the postage meter machine, only the entry of the user name is still required in order to obtain an access authorization for a specific cost allocation account, and thus for the allocated advertising design as well. Such an auxiliary function can be additionally stored in the chip card 10 as a temporary auxiliary function. The authorization for the print-out of all cost-center-related accounting data is another temporary, auxiliary function, whereby no switch-over into a service mode need ensue, and only a name still has to be entered, particularly since the date is automatically prescribed by the postage meter machine. A further advantageous possibility is the selection with step 137--via a name and/or password input--of different forms of cost-allocation-account-related accounting reports to be produced with the printer of the postage meter machine.

Detailed Description Text (70):

The chip card 10 thus contains more data than are usually required. At least two conditions must be satisfied (name and country, name and date or country and date) for fetching these data. Auxiliary functions, special functions, or further data can be used with the assistance of temporarily valid passwords that are communicated to the user upon request when payment is guaranteed. By changing the chip card, the auxiliary functions can be updated or data can be updated, without having to modify the programs in the postage meter machine.

Detailed Description Text (73):

The inking ribbon costs and operating costs are dependent on the type and number of uses. The cost allocation account number in the last chip card to be plugged is thus the respective accounting basis for the consumption of inking ribbon and/or

labels.

Detailed Description Text (74):

The entry of an identification code on the part of the user is not a precondition for reading such data from the chip card. The user is already authorized to have his advertising design automatically selected. One-hundred such software measures have been undertaken in the postage meter machine on the basis of the program means, these allowing the access of the user to the data that relate to his or her cost allocation account and simultaneously suppressing access of the user to the data that relate to other cost allocation accounts.

Detailed Description Text (75):

The programming tape 101 need not be a program that is stored in the non-volatile memory of the memory 3 for communication via the chip card reader with the chip card, but can instead be formed by a software unit as the programming stage 101 in another embodiment. This embodiment includes an addressable table having at least one password in order automatically to undertake a data exchange between a protected card memory area and the elsewhere present non-volatile memory of the memory means 3 serially within the framework of a communication protocol as soon as the chip card 10 has been inserted into the plug-in slot 26. For example, the card may allow three attempts to enter a password. Differing from the manual input of a password, one can assume freedom from error for the automatic entry of passwords stored in the table with the steps 169 and/or 139. Manual entry attempts are thus unnecessary (see steps 171 or 141), and a maximum of three passwords in programming stage 101 that can be allocated to the various user groups are possible. The three user groups form the set of users.

Detailed Description Text (76):

The postage meter machine program then in step 162 and/or step 132 determines the user group to which the owner of the plugged-in chip card belongs and enables corresponding functions (for data exchange step 126 and/or 139), or inhibits functions for unauthorized users. The postage meter machine is inhibited when a chip card that does not belong to the set of users is inserted.

Detailed Description Text (77):

FIG. 4 shows a corresponding flowchart. After the start and the usual initialization routine of the postage meter machine, the chip card information is first interrogated--as shown in FIGS. 2 or 3--before the system management routine begins.

Detailed Description Text (78):

After the turn-on and the initialization, the configuring chip card Ai can still be inserted into the plug-in slot 23 within a time window. When, however, the end of this chronological duration is reached without a configuring chip card Ai having been inserted, the old configuration of the postage meter machine remains set and the request "INPUT CARD B" ensues in the display.

Detailed Description Text (79):

As long as no chip card was plugged-in, work cannot be carried out with the postage meter machine, i.e. the insertion motor for a sheet of paper, a letter or the like does not start.

Detailed Description Text (80):

Data are read from the chip card after a suitable card has been plugged-in. The identification of a valid card, the selection of a allocation account cost and the setting of the functions ensues, controlled by programming stages 100 and 101.

Detailed Description Text (81):

On the basis of the programming stages 100 and 101, a command sequence is called that begins with the commands RESYNCHRONIZATION, SELECT APPLICATION, POWER ON,

SELECT ICC-APPLICATION shown in FIG. 5 and that comprises further commands, including commands for switching into the protected mode of the chip card and for entering passwords. Only after completion of this routine can the data be fetched in order to automatically undertake the setting of the user allocation account cost and the associated, further, aforementioned functions.

Detailed Description Text (83):

The programming stages 100 and 101 are thus provided in order to form a command sequence D1, D3, D5, D7, D9, etc., on the part of the postage meter machine and in order to automatically fetch the command sequence D2, D4, D6, D8, etc., from the chip card and the data supplied by it for setting the user allocation account cost and the associated, further functions.

Detailed Description Text (91):

An I/O unit 20 in the form of a chip card write/read unit having an interface motherboard 24 and a contacting device 25 (see FIG. 9) are built into the postage meter machine such that an opening for the plug-in slot 26 of the contacting device 25 that is easily accessible to the user is located at the back side of the postage meter machine above the terminal (I/O unit 22) for the serial interface of the scale. Good accessibility is achieved on the basis of the position of the opening in the upper third at the back side of the postage meter machine vis-a-vis the LCD (output unit 4). Special visual monitoring when plugging the chip card 13 in is not required since the chip card 13 is introduced from above and is located at the same level as the LCD display when being plugged in.

Detailed Description Text (92):

FIG. 8 shows a flowchart, similar to that of FIG. 4, when a user chip card ICCB is to be employed. After the start and the usual initialization routine of the postage meter machine, the chip card information is again first interrogated in steps 120, 121, 130, 131, 132 and 150 before the system management routine begins (step 200). The authorization in step 131' is then checked in step 132'. When an unauthorized chip card is plugged in, a return is always undertaken back to step 131'.

Detailed Description Text (95):

The memory 3 is composed in a standard manner of a plurality of read-only memories, temporary memories and of non-volatile memories. Together with the CPU 5, a portion of the memories forms a protected postage area within the processor system 111 in a known way. A read-only memory of the memory 3 of the postage meter machine contains programs for communication with the I/O unit 20. Moreover, the programs for a user and addressable tables having addressable data are also stored in the read-only memory of the postage meter machine, whereby each table can be fetched allocated to a specific function. These programs are entered into a programming stage software 100, such as a software stage, that, after the plug-in of a chip card 10 (or 13, as in FIG. 1) into an opening in the postage meter machine provided for that purpose, automatically undertakes the setting of the user allocation account cost and of the appropriate advertising design, and also prevent the call-in of outside allocation account cost data.

Detailed Description Text (97):

As noted above, the postage meter machine is equipped with at least one further, I/O unit 20 (such as a chip card and write/read unit) and the printer module 7 forms a further output unit of the postage meter machine. In I/O unit 20 and the printer module 7 are respectively connected to the input/output control means 6 via serial interfaces 64 and 66.

Detailed Description Text (102):

In FIG. 9, a contacting device 25 is connected via a first terminal ST1 to an interface motherboard 24 of the chip card write/read unit forming I/O unit 20. A second terminal ST2 of the interface motherboard 24 is coupled to the power supply circuit of the postage meter machine and a third terminal ST3 is coupled to the

serial interface 64.

Detailed Description Text (103):

For example, a unit known as a CARD READER ENHANCED ADAPTOR MODULE (CREAM) of the ORGA Company can be utilized as chip card write/read unit forming the I/O unit 20.

Detailed Description Text (104):

This known CREAM includes the interface motherboard 24 and the contacting device 25 adapted for ISO chip cards according to the push-pull principle. The manufacturer of the contacting device is Amphenol-Tuchel Electronics GmbH located in Heilbronn, Germany. The same manufacturer distributes the interface motherboard 24. The interface motherboard 24 has its own processor (80C31) and memory in order to be able to execute standard software for all chip cards in common use. The access onto the interface is implemented via a serial, standard interface (V.24 having TTL level) that is connected to the serial interface of the postage meter machine at ST3. The interface motherboard 24 is connected to the 5 V at ST2 voltage supply and to a V24 driver of the postage meter machine. The V24 driver comprises a level converter from +5 V to ± 12 V in the postage meter machine.

Detailed Description Text (105):

The contacting device 25 of the chip card write/read unit forming the I/O unit 20 is equipped with eight electrical contacts defined in the ISO standard (ISO 7816) and enables more frequent change of cards for a plurality of further users.

Detailed Description Text (106):

The introduced chip card 10 and 13 contains a corresponding set of contacts numbering eight contacts, a processor and a memory. The communication and operating system of the card enables the implementation of communication protocols and the DES algorithm. Access onto the memory of the card is controlled with the communication protocol.

Detailed Description Text (107):

The operating system of the postage meter machine is thus capable of gaining access to the memory of the chip card and to read and to write its contents. The programming stage 100, which may be a software stage contained in the postage meter machine undertakes an appropriate signaling or message in the output unit 4 (LCD) when a chip card is not inserted and inhibits franking with the postage meter machine until the chip card 10 and 13 for setting the user allocation account cost and the associated advertising design is plugged-in.

Detailed Description Text (109):

After switching the postage meter machine on, the display "Card" appears in the display and thus prompts the user to insert a chip card. As long as no chip card is plugged, franking cannot be carried out with the postage meter machine, i.e. the insertion motor for a letter does not start.

Detailed Description Text (110):

After the insertion of a suitable card, data are read from the chip card. The identification of a valid card, the selection of a allocation account cost, and the setting of an advertising design thus ensue. When there are no errors, the display "Card" disappears and the corresponding numbers of the allocation account cost and of the advertising design are displayed.

Detailed Description Text (112):

The keys previously provided for setting the advertising design and the allocation account cost have no function. The erroneous or intentionally false setting of someone else's allocation cost account is thus prevented. A user not legitimized by the possession of a chip card no longer has any possibility of fetching the data of someone else's allocation center cost in response to pressing a button.

Detailed Description Text (114):

The transfer shown in FIG. 5 between the operating system of the postage meter machine and the chip card interface ensues according to a master/slave principle. As master, the postage meter machine generates commands and receives replies from the chip card interface as the slave. The dialogue routine is constantly implemented in the background. It is composed of five commands.

Detailed Description Text (115):

First, a resynchronization is implemented. The postage meter machine sends a first data set D1 containing four bytes. As a result, the chip card is placed into a defined condition. This data set D1 contains an address in the first byte, one byte (check byte) for a check word with counter reading for each protocol unit (PDU), and one byte for the data length. The data length initially amounts to the length 00. The check byte serves the purpose of error protection of the transmission.

Detailed Description Text (116):

The reply of the chip card means is a data set D2 containing four bytes, having the mirrored address in the first byte, the check byte, and the byte for the data length.

Detailed Description Text (118):

In the error-free case, the chip card unit returns a return code from which it proceeds that the chip card is plugged-in. The data set D4 for the return code again comprises the mirrored address in the first byte. A following check byte is again incremented in the upper nibble (half byte). A third byte for the data length indicates the data length 01 here. A fourth byte thus follows that forms the actual return code for the plugged-in but voltage-less chip card. The check byte again follows as a termination.

Detailed Description Text (120):

As a reply of the chip card unit, the "Answer to Reset" defined according to the T=14 specification is anticipated, this covering a data set D6 having 24 bytes, whereby the last byte is again the check byte.

Detailed Description Text (121):

The fourth command SELECT ICC-APPLICATION contains an identifier of the card manufacturer for the ICC (Integrator Chip Card). The data set D7 contains a plurality of interlaced or nested layers. The first layer comprises the address in the first byte, the check byte, the byte for the data lengths, which is followed by another 20 bytes that begin with a check byte which is followed by an address byte, a check byte, and a byte for the data length in the second layer; a third layer then begins with the check byte and a further byte and has an instruction byte F1 and a byte 0B for the data length of another following eleven bytes which contain the aforementioned identifier of the card manufacturer in the form of ASCII-coded data. These eleven bytes stand for the identification 9280 ICC-3/3. Two check bytes form the termination.

Detailed Description Text (122):

A data set D8 which is 21 bytes long and with which an application is selected is anticipated as the reply of the chip card unit.

Detailed Description Text (123):

With the fifth command, READ TOKEN, the chip card is requested to output data from unprotected area. The first and second layers of the data set D9 that is a total of 13 bytes long are constructed analogously to the fourth command, whereby the eighth through eleventh bytes contain the actual instruction for READ TOKEN and two check bytes again reside at the end.

Detailed Description Text (124):

A data set D10 that is 64 bytes long is again anticipated as the reply of the chip

card unit, this data set D10 having the mirrored address in the first byte, the check byte, the byte for the data length, etc., and the check byte at the end. The ~~twelfth byte, thereby contains the data for the chip card number (card #),~~ the thirteenth byte contains the data for the allocation account cost number (KST #), and the fourteenth byte contains the data for the advert mark number (AD #).

Detailed Description Text (125):

The data are read from the chip card with the data set D10 and are written at the corresponding memory location of the postage meter machine. The entry of an identification code on the part of the user is not a condition for reading such data from the chip card. The owner is already authorized to have his or her advertising design automatically selected. Such software measures have been undertaken in the postage meter machine with the programming stage 100 and allow the access of the user to the data that relate to his or her allocation account cost and simultaneously suppress the access of the user to the data that relate to the other allocation account cost. The programming stage 101 may contain memory locations of the postage meter machine operating system.

Detailed Description Text (126):

In a further version that is not shown, the unprotected memory area of the chip card is first interrogated after a chip card 13 has been plugged into an opening of the postage meter machine provided for that purpose, and the data are then transferred from the unprotected memory area into the memory of the postage meter machine. The data can modify the function of the postage meter machine and/or reload a current postage fee table, as has already been set forth. Data are stored in addressable tables, whereby each table has a specific function fetchably allocated to it and can be transferred into the memory of the postage meter machine. 2 through 7K bytes are available for this purpose in the protected memory area of the chip card, whereas only 32 bytes can be fetched in the unprotected memory area of the chip card.

Detailed Description Text (127):

In particular, a chip card 10e carrying a current postage fee table and an additional postage fee table valid for the future rates is utilized as the data carrier, as already known for prescribing the values of fee values. FIG. 10 shows a simplified block circuit diagram of the postage meter housing 1 containing a chip card I/O (write/read) unit 2. A memory 3 is in communication with an output unit 4 such as a display and is in communication via a bus with a control module 5, as well as with an input/output unit 6 control to which a printer module 7, an input unit 8 and the chip card I/O unit 2 are connected. Further--not shown in greater detail in FIG. 1-- , a terminal for a scale module is provided directly via the bus or via the input/output unit 6 control. Further, the presence of a programmable, battery-supported clock module 9 in every postage meter machine is assumed, the accuracy and programming thereof being such that the correct date data are produced in order to load the memory 3 of the postage meter machine with the current date data and the future, specific date data for when postage fee tables allocated thereto take effect. The programming is particularly directed to the locally different time to be taken into consideration, the time zones of the earth essentially dependent on the degree of longitude or the date limit to be taken into consideration.

Detailed Description Text (129):

The control module 5 of the postage meter machine, upon initialization of the postage meter machine 1, loads at least one postage fee table for the postage meter machine from the chip card 10a via the I/O unit 2 and the input/output control unit 6 in a predetermined memory space of the memory 3. The control module 5 selects the current postage fee cable in force via on the basis of the dispatching country or location that has been entered and on the basis of the date, the respective postage fee being calculated with reference thereto. The circuitry in the control module 5 for accomplishing these functions can be fabricated as a programmed or a freely

programmable logic module, or hard-wired as a program of a microprocessor controller programmed by hardware and/or software.

Detailed Description Text (130):

The chip card 10a is provided for use as a debit card with a national or international validity; this, however, is not intended to exclude other accounting methods for monetary data. It is preferably executed for use in the European Community. For example, a service center for the National Postage Authorities assumes the payment and debiting of the fees.

Detailed Description Text (131):

Further functions can be stored in the chip card 10a fetchable by the current date supplied by the clock module 9. The information for the further functions to be loaded into the postage meter machine is thereby linked to a condition (date, time, location).

Detailed Description Text (132):

In particular, the protection against fraudulent manipulations can be enhanced in that a plurality of functions allocated to the updating date can be loaded into the postage meter machine during updating and the further functions to be triggerably loaded are many and are not selectively offered. For protection against fraudulent manipulations, a printout that can be machine-read only by the respective National Postal Authority can be prescribed by the National Postal Authority to which the respective dispatching location belongs. This printout, for example, can be the transaction number for an authorization check in bar code presentation or some other declared character which is printed at a defined location on the postal matter upon employment of the same or of another printer.

Detailed Description Text (140):

In a further version of the invention shown in FIG. 14, cellular communication networks, particularly Group Special Mobile Networks (GSM networks) are utilized as the data carrier. Such GSM networks comprise a mobile switching system (SSS) having interfaces to other cellular radio networks or fixed networks NETZ, particularly (PSTN, ISDN, PDN), as well as to the mobile subscribers PM (at which a postage meter machine constructed and operating in accordance with the invention having a receiver unit 230 and a display 400 can be located) via a fixed broadcast station system BSS. A transcoder unit TCE is connected in the BSS to a plurality of BSS central units BCE to which the respective transmission/reception stations BTS are connected which exchange information with a postage meter receiver unit 230. The operating and maintenance center OMC/SSS of the mobile broadcast system and the operating and maintenance center OMC/BSS of the fixed broadcast station system BSS the broadcast station central equipment BCE are equipped with respective memories 300, 301 and 302 which constitute memory sections for the fetchable, published postage fee tables and non-secret auxiliary function tables and for further service and auxiliary information.

Detailed Description Text (142):

An information field shown in FIG. 15 for date, dispatching location, weight, format, postage fee and further standard particulars, as well as for the auxiliary functions allowed by the respective national postage authority can be displayed in the display 400 of the postage meter machine 100 in order to undertake a selection of the functions. The information such as device number, transaction number, piece payment, registration amount, postage sum, accounting list that can only be fetched with a password are thereby not displayed.

CLAIMS:

4. An apparatus for producing a franking image uniquely allocated to one cost center among a plurality of cost centers comprising:

an automatic postage meter unit having an accounting means for conducting accounting procedures for entering and debiting funds in a plurality of different user accounts respectively, uniquely identified and accessible by a cost center number, first and second means for entering data, means for generating a user-identifiable data output regarding said accounting procedures for controlling transfer of data between said first and second means for entering data and said means for generating a data output, an electronic printer, and a processor;

a plurality of chip cards respectively possessed by different users respectively associated with said user accounts; each chip card having a memory with data including a chip and number, and its user's cost center number stored therein;

a chip card write/read means, forming said second means for entering data, for reading the data stored in the memory of one of said chip cards which is currently inserted in said write/read means including said chip card number and the user's cost center number; and

a non-volatile memory contained in said processor into which said data from said chip card are downloaded by said processor, and said processor including means, after downloading said data from said chip card, for automatically setting said printer to cause the printing of a franking image and for debiting the user account identified by the cost center number of the currently inserted chip card; and

means in said postage meter unit for allowing access, while said chip card is inserted in said write/read means, to the user account identified by the cost center number downloaded from the currently inserted chip card and for simultaneously suppressing access to all other user accounts in said accounting means.

5. An apparatus for producing a franking image useable with a plurality of different advertisements comprising:

an automatic postage meter unit having accounting means for conducting accounting procedures for entering and debiting funds, first and second means for entering data, means for generating a user-identifiable data output associated with said accounting procedures, input/output control means for controlling transfer of data between said first and second means for entering data and said means for generating a data output, an electronic printer, and a processor;

a plurality of chip cards, each chip card having a memory with data including a chip card number and an advertising design number stored therein;

a chip card write/read means, forming said second means for entering data, for reading the data stored in the memory of one of said chip cards which is currently inserted in said write/read means including said chip card number and said advertising design number; and

a non-volatile memory contained in said processor having a plurality of advertising images stored therein, each advertising image being uniquely identified by an advertising design number, and said processor downloading said data from a currently inserted chip card into said non-volatile memory and said processor including means, after downloading said data from currently inserted chip card, for automatically setting said printer apparatus to cause the printing of a franking image and an advertising image corresponding to the advertising design number on the currently inserted chip card.

6. An apparatus for producing a franking image uniquely allocated to one cost center among a plurality of cost centers and combined with one advertisement among a plurality of advertisements, comprising:

an automatic postage meter unit having accounting means for conducting accounting procedures for entering and debiting funds in a plurality of different user accounts respectively uniquely identified and accessible by a cost center number; first and second means for entering data, means for generating a user-identifiable data output regarding said accounting procedures, input/output control means for controlling transfer of data between said first and second means for entering data and said means for generating a data output, an electronic printer, and a processor;

a plurality of chip cards respectively possessed by different users respectively associated with said user accounts, each chip card having a memory with data including a chip card number and its user's cost center number and an advertising design number stored therein;

a chip card write/read means, forming said second means for entering data, for reading the data stored in the memory of one of said chip cards which is currently inserted in said write/read means including said chip card number, the user's cost center number and the advertising design number; and

a non-volatile memory contained in said processor having a plurality of advertising images stored therein, each advertising image being identified by an advertising design number, and said processor downloading said data from the currently inserted chip card into said non-volatile memory, and said processor including means, after downloading said data from said currently inserted chip card, for automatically setting said printer to set said printer apparatus to cause printing of a franking image in combination with an advertising image corresponding to the advertising design number on the currently inserted chip card, and to cause said accounting means to debit the user account corresponding to the cost center number by an amount corresponding to a franking amount.

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L3: Entry 1 of 1

File: USPT

Feb 2, 1999

DOCUMENT-IDENTIFIER: US 5867494 A

TITLE: System, method and article of manufacture with integrated video conferencing billing in a communication system architecture

Detailed Description Text (93):

2. Token Server 454

Detailed Description Text (97):

2. Token Servers 454

Detailed Description Text (104):

2. TOKEN database service

Detailed Description Text (107):

5. TOKEN.sub.-- HOSTS database service

Detailed Description Text (345):

Independence from any specific physical network hardware, allows TCP/IP to integrate many different kinds of networks. TCP/IP can be used over an Ethernet, a token ring, a dial-up line, or virtually any other kinds of physical transmission media.

Detailed Description Text (1280):

The Welcome server's first task is to authenticate the user. This requires the use of single use TOKENS, Passcode authentication and Hostile IP filtering. The first is done using a Token Server 454, while the other two will be done using direct database 456 access.

Detailed Description Text (1284):

2. Token Server 454

Detailed Description Text (1285):

This is a database client and not a Web Server. The Token servers 454 are used by Welcome Servers 450 to issue a TOKEN to login attempts. The issued TOKEN, once validated, is used to track the state information for a connection by the Application Servers. The TOKEN information is be maintained in a database on a database server 456 (repository) behind the corporate firewall.

Detailed Description Text (1286):

The Token Servers 454 do the following tasks:

Detailed Description Text (1287):

1. Issue single use TOKEN during authentication phase.

Detailed Description Text (1288):

2. Validate single use TOKEN (mark it for multi use).

Detailed Description Text (1289):

3. Validate multi-use TOKEN.

Detailed Description Text (1290):

4. Re-validate multi-use TOKEN.

Detailed Description Text (1291):

The Token Servers 454 are required to issue a unique TOKEN on every new request. This mandates a communication link between multiple Token Servers in order to avoid conflict of TOKEN values issued. This conflict is eliminated by assigning ranges to each Token Server 454.

Detailed Description Text (1292):

The TOKEN is a sixteen character quantity made up of 62 possible character values in the set [0-9A-Za-z]. The characters in positions 0,1 and 2 for each TOKEN issued by the Token Server are fixed. These character values are assigned to each Token Server at configuration time. The character at position 0 is used as physical location identifier. The character at position 1 identifies the server at the location while the character at position 2 remains fixed at '0'. This character could be used to identify the version number for the Token Server.

Detailed Description Text (1293):

The remaining 13 characters of the TOKEN are generated sequentially using the same 62 character set described above. At startup the TOKEN servers assign the current system time to the character positions 15-10, and set positions 9-3 to '0'. The TOKEN values are then incremented sequentially on positions 15-3 with position 3 being least significant. The character encoding assumes the following order for high to low digit values : 'z'-'a', 'Z'-'A', '9'-'0'.

Detailed Description Text (1294):

The above scheme generates unique tokens if the system time is computed in 4 byte values, which compute to 6 base-62 characters in positions 15-10. The other assumption is that the scheme does not generate more than 62A7 (35*10¹²) TOKENS in one second on any given Token Server in any embodiment.

Detailed Description Text (1295):

The use of TOKEN ranges allows the use of multiple Token Servers in the Domain without any need for explicit synchronization. The method accommodates a maximum 62 sites, each having no more than 62 Token Servers. An alternate embodiment would accommodate more sites.

Detailed Description Text (1296):

All of the Token Servers in the DMZ are mapped to token.galileo.mci.com. The initial embodiment contains two Token Servers 454. These Token Servers 454 are physically identical to the Welcome Servers 450, i.e., the Token Service daemon will run on the same machine that also runs the HTTP daemon for the Welcome service. In another embodiment, the two run on different systems.

Detailed Description Text (1297):

The Welcome Server(s) 450 use the Token Server(s) 454 to get a single use TOKEN during the authentication phase of the connection. Once authenticated, the Welcome Server 450 marks the TOKEN valid and marks it for multiple use. This multi-use TOKEN accompanies the service selection screen sent to the user by the Welcome Server.

Detailed Description Text (1298):

The design of TOKEN database records is discussed in detail below.

Detailed Description Text (1300):

The Application servers are Web servers that do the business end of the user transaction. The Welcome Server's last task, after a successful authentication, is

to send a service selection screen to the user. The service selection screen contains the new multi-use TOKEN.

Detailed Description Text (1301):

When the user selects a service, the selection request, with its embedded TOKEN, is sent to the appropriate Application Server. The Application Server validates the TOKEN using the Token Server 454 and, if valid, serves the request. A Token Server can authenticate a TOKEN issued by any one of the Token Servers on the same physical site. This is possible because the Token Servers 454 are database clients for the data maintained on a single database repository behind the corporate firewall.

Detailed Description Text (1302):

An invalid TOKEN (or a missing TOKEN) always leads to the "Access Denied" page. This page is served by the Welcome Server(s) 450. All denial of access attempts are logged.

Detailed Description Text (1303):

The actual operation of the Application Server depends on the Application itself. The Application Servers in the DMZ are mapped to <appName><num>.galileo.mci.com. Thus, in an embodiment with multiple applications (e.g., Profile Management, Message Center, Start Card Profile, Personal Web Space etc.), the same Welcome and Token servers 450 and 454 are used and more Applications servers are added as necessary.

Detailed Description Text (1304):

Another embodiment adds more servers for the same application. If the work load on an application server increases beyond its capacity, another Application Server is added without any changes to existing systems. The SERVERS and TOKEN.sub.-- HOSTS databases (described below) are updated to add the record for the new server. The <num> part of the host name is used to distinguish the Application Servers.

Detailed Description Text (1308):

The Token Server(s) run a TCP service that runs on a well known port for ease of connection from within the DMZ. The Token Service daemon uses tcp.sub.-- wrapper to deny access to all systems other than Welcome and Application server(s). In order to speed this authentication process, the list of addresses is loaded by these servers at configuration time, instead of using reverse name mapping at every request. The use of tcp.sub.-- wrapper also provides the additional tools for logging Token Service activity.

Detailed Description Text (1309):

The Application servers mostly work as front-ends for database services behind the firewall. Their main task is to validate the access by means of the TOKEN, and then validate the database request. The database requests are to Create, Read, Update or Delete exiting records or data fields on behalf of the user. The Application Servers do the necessary validation and authority checks before serving the request.

Detailed Description Text (1315):

The user Authentication libraries are developed in Perl to authenticate the user identity. NSAPI's authentication phase routines also add features for TOKEN verification and access mode detection in the servers themselves.

Detailed Description Text (1324):

The Login Page is a cgi-generated page that contains an embedded single use TOKEN, a Java applet, and form fields for the user to enter a User Id and Passcode. The page may display a graphic to emphasize service.

Detailed Description Text (1326):

The response from this page contains the TOKEN, a scrambled TOKEN value generated by the applet, User Id and Passcode. This information is sent to the Welcome server using a POST HTTP request by the Java applet. The POST request also contains the Applet signature.

Detailed Description Text (1329):

The Server Selection Page is a cgi-generated page which contains an embedded multi-use TOKEN. This page also shows one or more graphics to indicate the types of services available to the user. Some services are not accessible by our users. In other embodiments, when more than one service exists, a User Services Database keyed on the User Id is used to generate this page.

Detailed Description Text (1335):

The Access Denied Page is a static page that displays a message indicating that an access failed due to authentication error. This page automatically loads the Login Page after a delay of 15 seconds. The Access Denied page is called by the Application Servers when their authentication service fails to recognize a TOKEN. All loads of this page will be logged and monitored.

Detailed Description Text (1336):

2. Token Servers 454

Detailed Description Text (1337):

The TOKEN service on the Web site is the only source of TOKEN generation and authentication. The Tokens themselves are stored in a shared Database 456. This database can be shared among all Token servers. The Token Database is behind the firewall out of the DMZ.

Detailed Description Text (1338):

The Token service provides the services over a well-known (>1024) TCP port. These services are provided only to a trusted host. The list of trusted hosts is maintained in a configuration database. This database is also maintained behind the firewall outside of the DMZ. The Token servers read their configuration database only on startup or when they receive a signal to refresh. The Token services are:

Detailed Description Text (1339):

Grant a single use TOKEN for login attempt.

Detailed Description Text (1340):

Validate a single use TOKEN.

Detailed Description Text (1341):

Validate a TOKEN.

Detailed Description Text (1342):

Re-Validate a TOKEN.

Detailed Description Text (1343):

TOKEN aging is implemented by a separate service to reduce the work load on the Token servers.

Detailed Description Text (1344):

All access to the Token Server(s) is logged and monitored. The Token Service itself is written using the tcp.sub.-- wrapper code available from MCI's internal security groups.

Detailed Description Text (1360):

Single use TOKENS for login attempts;

Detailed Description Text (1361):

Validated TOKENS will accompany all transactions;

Detailed Description Text (1362):
TOKEN aging to invalidate a TOKEN if it has not been used for ten minutes;

Detailed Description Text (1363):
TOKEN is associated with the IP Address of the calling machine, so TOKEN stealing is not an easy option;

Detailed Description Text (1364):
Use of SSL prevents TOKEN or DATA stealing without having physical access to the customer's display;

Detailed Description Text (1365):
Use of TOKEN in a form analogous to the Netscape Cookie gives us the option to switch to cookies at a later date. Cookies offer us the facility to hide the TOKEN even further into the document for one extra layer of security; and

Detailed Description Text (1367):
In addition to the security implemented by TOKEN as described above, the Web Server (s) are in a Data Management Zone for further low level security. The DMZ security is discussed below.

Detailed Description Text (1377):
A. The Web server gets a Single Use Token from its internal Token service.

Detailed Description Text (1379):
C. The Web server Records the Applet, Token, and Client IP address in a Database.

Detailed Description Text (1380):
D. The Web server sends back the Login Screen, with Applet & Token.

Detailed Description Text (1384):
9. When the User presses Enter (or clicks on the LOGIN button) the Java Applet sends the UserId, Passcode, Token, and Scrambled Token back. The Scrambling Algorithm is specific to the Applet that was sent in Step 7D.

Detailed Description Text (1389):
14. If the test is valid; The server sends a select services screen to the Browser with an embedded Token. The Token is still associated with the Browser's IP address, but it now has an expiration time.

Detailed Description Text (1391):
When the user selects an option from the Service selection screen, the request is accompanied by the Token. The token is validated before the service is accessed, as shown in FIG. 43.

Detailed Description Text (1393):
The screens generated by the Application Servers all contain the Token issued to the user when the Login process was started. This Token has an embedded expiration time and a valid source IP Address. All operation requests include this token as a part of the request.

Detailed Description Text (1394):
The service requests are sent by the browser as HTML forms, APPLET based forms or plain Hyper Links. In the first two instances, the Token is sent back as a Hidden field using the HTTP-POST method. The Hyper-Links use either the HTTP-GET method with embedded Token or substitute the Cookie in place of a Token. The format of the Token is deliberately chosen to be compatible with this approach.

Detailed Description Text (1397):

The following databases (C-tree services) on the NIDS server are used by the

Welcome Server, Token Server and Profile Management Application Server:

Detailed Description Text (1408):

TOKEN;

Detailed Description Text (1411):

TOKEN.sub.-- HOSTS; and

Detailed Description Text (1414):

2. TOKEN database service.

Detailed Description Text (1415):

The TOKEN database service is accessed by the Token Servers. The primary operations on this service are Create a new record, read a record for a given Token value and update a record for the given Token value.

Detailed Description Text (1416):

A separate chron job running on the NIDS Server itself also accesses this database and deletes obsolete records on a periodic basis. This chron job runs every hour. It does a sequential scan of the database and deletes records for expired tokens.

Detailed Description Text (1417):

The TOKEN database service contains the TOKEN records. The TOKEN records use a single key (the TOKEN) and have the following fields:

Detailed Description Text (1420):

3. Token Value (16);

Detailed Description Text (1425):

The key field is the Token Value.

Detailed Description Text (1444):

5. TOKEN.sub.-- HOSTS database service.

Detailed Description Text (1445):

This database service lists IP Addresses of the hosts trusted by the Token Servers. This database is read by the Token Service at configuration time. The records in this database contain the following fields:

Detailed Description Text (1451):

The key field is the IP Address. The Authority binary flag determines the access level. The low access level only allows validate/re-validate commands on an existing TOKEN; the high access level additionally allows Grant and Validate single use TOKEN commands as well.

Detailed Description Text (1467):

4. Scan the TOKEN database and report on all records. This report format will be geared towards traffic reporting rather than scanning each entry.

Detailed Description Text (1468):

5. Scan the TOKEN database to delete obsolete records.

Detailed Description Text (1479):

TOKEN usage statistics;

Detailed Description Text (1488):

Incorrect use of TOKENS;

Detailed Description Text (1490):

TOKEN Expiration; and

Detailed Description Text (1610):

The discussion thus far has provided an introduction to the Internet, and therefore Internet telephony, but Internet telephony encompasses quite a few areas of development. The following is a summary of Internet telephony, divided into six key areas. The first area consists of access to Internet telephony services. This area involves accessing and utilizing the Internet using such mechanisms as satellites, dialup services, T1, T3, DS3, OC3, and OC12 dedicated lines, SMDS networks, ISDN B-channels, ISDN D-channels, multirate ISDN, multiple B-channel bonded ISDN systems, Ethernet, token ring, FDDI GSM, LMDS, PCS, cellular networks, frame relay, and X.25.

Detailed Description Text (3141):

OE records (customer profiles) are entered in an upstream system and are downloaded at 530 to the DDS mainframe 532. The DDS mainframe downloads the OE records to the Network Information Distributed Services (NIDS) servers 534 on the ARU/ACP and the VFP/Executive Server 536. These downloads are done via the ISN token ring network 538. On the executive server 536, the OE records are stored in the local Executive Server database (not shown).

Detailed Description Text (3142):

BDRs are cut by both the Executive Server 536 and the ACP 540. These BDRs are stored in an Operator Network Center (ONC) server 542 and are uploaded to the DDS mainframe 532. The uploads from the ONC servers 542 to the DDS mainframe are done via the ISN token ring network 538. The ARU 502 prompts subscribers with their number of voicemail/faxmail messages. The number of messages a subscriber has is obtained from the VFP 504 by the ACP 540 over the ISNAP Ethernet 544. Note that the ACPs 540 may be at any of the ISN sites.

Detailed Description Text (3166):

The left DEC 8200 machine 536 is shown with all of its ATM and FDDI connections 570 drawn in. The right DEC 8200 is shown with its Ethernet connections 572 drawn in. In actual deployment, both machines have all of the ATM, FDDI, token ring, and Ethernet connections 570 and 572 shown. The Cabletron hubs 562 show fewer connections into ports than actually occur because each 8200 536 is drawn with only half its network connectivity. Also, only one of the four media servers 560 is shown connected to the Ethernet ports. In fact, there is a transceiver and two Ethernet connects for each media server.

Detailed Description Text (3188):

FIG. 49 shows the hardware and network connections from the VFP 504 to the external network. Notes about FIG. 49: Each 8200 536 is connected onto the ISN token ring 640 through the Bay Hubs for DDS access over SNA and BDR access over IP. A pair of terminal servers 642 has a connection to the console port of each machine and hub. A DEC AlphaStation 200 564 runs console manager software to access the ports connected to the terminal servers 642. The DECNIS routers are all on an FDDI ring 568 (FIG. 46), connected between the Bay Hubs 566 and the two DEC 8200s 536.

Detailed Description Text (3203):

An interior user is a user connected to the ISN production token ring 5115. Token ring 5115 is connected to an interior packet filter 5120 such as a Cisco model 4500 modular router. Packet filter 5120 is connected to token ring LAN 5125, which in turn is connected to bastion host 5110. Token ring LAN 5125 is a dedicated token ring that is isolated from all components other than bastion host 5110 and interior packet filter 5120, thereby preventing any access to bastion host 5110 through token ring LAN 5125 except as allowed by packet filter 5120.

Detailed Description Text (3219):

Dial-in access is provided through dial-in environment 5105. The use of authentication server 5235 provides for authentication of users to prevent access from users that are not authorized to access the DMZ. The authentication method implemented uses a one-time password scheme. All internal systems and network elements are protected with one-time password generator token cards, such as the SecurID secure identification token cards produced by Security Dynamics, using an internally developed authentication client/server mechanism called Keystone. Keystone clients are installed on each element that receive authentication requests from users. Those requests are then securely submitted to the Keystone Servers deployed throughout the network.

Detailed Description Text (3281):

In addition, a LOGOFF button will appear at the bottom of the index frame. Clicking on this button will result in immediate token expiration, and the user will be returned to the login screen.

Detailed Description Text (3374):

This error screen is presented when a login attempt has failed due to an invalid account number, passcode, or a hostile IP address. This is also the screen that is displayed when a user's token has expired and he's required to login again.

Detailed Description Paragraph Table (1):

	Ele- ment Description
Local Exchange Carrier. For the purposes of these VNET scenarios, the phone is capable of making VNET calls, local calls or DDD calls. In some scenarios the VNET access may be done through .cndot. The customer dials a 700 number with the last seven digits being the destination VNET number for the call. The LEC will know that the phone is picked to MCI and route the call to the MCI switch. The MCI switch will strip off the "700", perform an ANI lookup to identify the customer ID and perform VNET routing using the VNET number and customer ID. .cndot. The customer dials an 800 number and is prompted to enter their Social Security number (or other unique id) and a VNET number. The switch passes this information to the DAP which does the VNET translation. PC1 Personal computer that has the capability to dial in to an Internet PC2 service provider or a corporate intranet for the purpose of making or receiving Internet telephony calls. The following access methods might be used for this PC Internet service provider .cndot. The PC dials an 800 number (or any other dial plan) associated with the service provider and is routed via normal routing to the modem bank for that provider. The user of the PC then follows normal log-on procedures to connect to the Internet. Corporate Intranet .cndot. The PC dials an 800 number (or any other dial plan) associated with the corporate Intranet and is routed via normal routing to the modem bank for that Intranet. The user of the PC then follows normal log-on procedures to connect to the Intranet. LEC Switching fabric for a local exchange carrier. This fabric provides SF1 the connection between Ph1/PC1/PC2 and MCI's telephone network. It also provides local access to customer PBXs. MCI Switching fabric for MCI (or for the purpose of patenting, any SF1 telephony service provider). These SFs are capable of performing MCI traditional switching capabilities for MCI's network. They are able SF2 to make use of advanced routing capabilities such as those found in MCI's NCS (Network Control System). NCS The NCS provides enhanced routing services for MCI. Some of the products that are supported on this platform are: 800, EVS, Universal Freephone, Plus Freephone, Inbound International, SAC(ISAC) Codes, Paid 800, 8XX/Vnet Meet Me Conference Call, 900, 700, PCS, Vnet, Remote Access to Vnet, Vnet Phone Home, CVNS, Vnet Card, MCI Card (950 Cards), Credit Card and GETS Card. In support of the existing VNET services, the DAP provides private dialing plan capabilities to Vnet customers to give them a virtual private network. The DAP supports digit translation, origination screening, supplemental code screening; 800 remote access, and some special features such as network call redirect for this service. To support the call scenarios in this document, the NCS also has the capability to made a data query to directory services in order to route calls to	

PCs. Dir Internet Directory Services. The directory service performs: Svc 1 .cndot. Call routing - As calls are made to subscribers using Internet Dir telephony services from MCI, the directory service must be Svc 2 queried to determine where the call should terminate. This may be done based upon factors such as the logged-in status of the subscriber, service subscriptions identifying the subscriber as a PC or phone only user preferred routing choices such as "route to my PC always if I am logged in", or "route to my PC from 8-5 on weekdays, phone all other times", etc. .cndot. Customer profile management - The directory service must maintain a profile for each subscriber to be able to match VNET numbers to the service subscription and current state of subscribers. .cndot. Service authorization - As subscribers connect their PCs to an IP telephony service, they must be authorized for use of the service and may be given security tokens or encryption keys to ensure access to the service. This authorization responsibility might also place restrictions upon the types of service a user might be able to access, or introduce range privileges restricting the ability of the subscriber to place certain types of calls. ITG Internet Telephony Gateway - The Internet Telephony Gateway 1 provides a path through which voice calls made be bridged ITG between an IP network and a traditional telephone 2 network. To make voice calls from an IP network to the PSTN, a PC software package is used to establish a connection with the ITG and request that the ITG dial out on the PSTN on behalf of the PC user. Once the ITG makes the connection through the voice network to the destination number, the ITG provides services to convert the IP packetized voice from the PC to voice over the PSTN. Similarly, the ITG will take the voice from the PSTN and convert it to IP packetized voice for the PC. To make voice calls from the PSTN to the IP network, a call will be routed to the ITG via PSTN routing mechanisms. Once the call arrives, the ITG identifies the IP address for the destination of the call, and establishes an IP telephony session with that destination. Once the connection has been established, the ITG provides conversion services between IP packetized voice and PCM voice. ITG These ITGs act in a similar capacity as the ITGs connected to the 3 PSTN, but these ITGs also provide a connection between the ITG corporate Intranet and the PBX. IAD The Internet access device provides general dial-up Internet access 1 from a user's PC to the Internet. This method of connecting to the IAD Internet may be used for Internet telephony, but it may also be 2 simply used for Internet access. When this device is used for Internet telephony, it behaves differently than the ITG. Although the IAD is connected to the PSTN, the information traveling over that interface is not PCM voice, it is IP data packets. In the case of telephony over the IAD, the IP data packets happen to be voice packets, but the IAD has no visibility into those packets and cannot distinguish a voice packet from a data packet. The IAD can be thought of as a modem pool that provides access to the Internet. PBX Private Branch Exchange - This is customer premise equipment 1 that provides connection between phones that are geographically PBX co-located. The PBX also provides a method from those phones to 2 make outgoing calls from the site onto the PSTN. Most PBXs have connections to the LEC for local calls, and a DAL connection to another service provider for VNET type calls. These PBXs also show a connection to a Directory Service for assistance with call routing. This capability does not exist in today's PBXs, but in the VNET call flows for this document, a possible interaction between the PBX and the Directory Service is shown. These PBXs also show a connection to an ITG. These ITGs provide the bridging service between a customer's Intranet and the traditional voice capabilities of the PBX. Ph11 These are traditional PBX connected phones. Ph12 Ph21 Ph22 PC11 These are customer premises PCs that are connected to customer PC12 Intranets. For the purposes of these call flows, the PCs have PC21 Internet Telephony software that allow the user to make or receive PC22 calls.

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☐ 1. Document ID: US 6134441 A

L31: Entry 1 of 6

File: USPT

Oct 17, 2000

US-PAT-NO: 6134441

DOCUMENT-IDENTIFIER: US 6134441 A

TITLE: Telemetry application numbering for SMS and USSD

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	FIGS	Drawings
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☐ 2. Document ID: US 6088589 A

L31: Entry 2 of 6

File: USPT

Jul 11, 2000

US-PAT-NO: 6088589

DOCUMENT-IDENTIFIER: US 6088589 A

TITLE: System, method and apparatus for handling high-power notification messages

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	FIGS	Drawings
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☐ 3. Document ID: US 6052591 A

L31: Entry 3 of 6

File: USPT

Apr 18, 2000

US-PAT-NO: 6052591

DOCUMENT-IDENTIFIER: US 6052591 A

**** See image for Certificate of Correction ****

TITLE: Broadcasting messages to mobile stations within a geographic area...

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	FIGS	Drawings
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☐ 4. Document ID: US 5930701 A

L31: Entry 4 of 6

File: USPT

Jul 27, 1999

US-PAT-NO: 5930701

DOCUMENT-IDENTIFIER: US 5930701 A

**** See image for Certificate of Correction ****

TITLE: Providing caller ID within a mobile telecommunications network

Full	Title	Creation	Front	Review	Classification	Date	Reference	Claims	RMOC	Draw. De
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☐ 5. Document ID: US 5878351 A

L31: Entry 5 of 6

File: USPT

Mar 2, 1999

US-PAT-NO: 5878351

DOCUMENT-IDENTIFIER: US 5878351 A

TITLE: Methods and apparatus for providing delayed transmission of SMS delivery acknowledgement, manual acknowledgement and SMS messages

Full	Title	Creation	Front	Review	Classification	Date	Reference	Claims	RMOC	Draw. De
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☐ 6. Document ID: US 5835856 A

L31: Entry 6 of 6

File: USPT

Nov 10, 1998

US-PAT-NO: 5835856

DOCUMENT-IDENTIFIER: US 5835856 A

TITLE: Transporting user defined billing data within a mobile telecommunications network

Full	Title	Creation	Front	Review	Classification	Date	Reference	Claims	RMOC	Draw. De
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Search Results - Record(s) 1 through 4 of 4 returned.

☐ 1. Document ID: US 6385728 B1

L28: Entry 1 of 4

File: USPT

May 7, 2002

US-PAT-NO: 6385728

DOCUMENT-IDENTIFIER: US 6385728 B1

TITLE: SYSTEM, METHOD, AND PROGRAM FOR PROVIDING WILL-CALL CERTIFICATES FOR GUARANTEEING AUTHORIZATION FOR A PRINTER TO RETRIEVE A FILE DIRECTLY FROM A FILE SERVER UPON REQUEST FROM A CLIENT IN A NETWORK COMPUTER SYSTEM ENVIRONMENT

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	Drawings	Claims	FIGURE	Drawings
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☐ 2. Document ID: US 6314521 B1

L28: Entry 2 of 4

File: USPT

Nov 6, 2001

US-PAT-NO: 6314521

DOCUMENT-IDENTIFIER: US 6314521 B1

TITLE: Secure configuration of a digital certificate for a printer or other network device

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	Drawings	Claims	FIGURE	Drawings
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☐ 3. Document ID: US 5933816 A

L28: Entry 3 of 4

File: USPT

Aug 3, 1999

US-PAT-NO: 5933816

DOCUMENT-IDENTIFIER: US 5933816 A

**** See image for Certificate of Correction ****

TITLE: System and method for delivering financial services

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	Drawings	Claims	FIGURE	Drawings
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☐ 4. Document ID: US 5465082 A

L28: Entry 4 of 4

File: USPT

Nov 7, 1995

US-PAT-NO: 5465082

TITLE: Apparatus for automating routine communication in a facility

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Classification	Claims	EMMC	Drawings
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L31: Entry 3 of 6

File: USPT

Apr 18, 2000

US-PAT-NO: 6052591

DOCUMENT-IDENTIFIER: US 6052591 A

**** See image for Certificate of Correction ****

TITLE: Broadcasting messages to mobile stations within a geographic area

DATE-ISSUED: April 18, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bhatia; Ranjit	Dallas	TX		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Ericsson Inc.	Research Triangle Park	NC			02

APPL-NO: 08/ 699661 [\[PALM\]](#)

DATE FILED: August 19, 1996

INT-CL: [07] [H07 Q 7/00](#)

US-CL-ISSUED: 455/445; 455/15, 340/825.03, 340/825.44, 380/23

US-CL-CURRENT: [455/445](#); [340/2.1](#), [340/7.27](#), [340/7.28](#), [340/7.45](#), [340/7.46](#), [380/247](#), [455/15](#)

FIELD-OF-SEARCH: 455/445, 455/432, 455/436, 455/439, 340/825.03, 340/825.44, 380/23

PRIOR-ART-DISCLOSED:

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PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
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<input type="checkbox"/> 4968966	November 1990	Jasinski et al.	340/825.44
<input type="checkbox"/> 5128934	July 1992	Jasinski	370/84
<input type="checkbox"/> 5131020	July 1992	Liebesny et al.	379/59
<input type="checkbox"/> 5159701	October 1992	Barnes et al.	455/15
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FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
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WO 96/20572	July 1996	WO	

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The Short Message Service--A New Service of Digital Mobile Communication Michael Hientz, et al., United States Patent and Trademark Office Washington, D.C.--May 1995, pp. 1-15.

F. Courau, et al., "Implementation of Broadcast and Personal Message Services in an Experimental Mobile Radio System", XP002019072, CNet, France, Jun. 30, 1997, p. 144-151.

ART-UNIT: 279

PRIMARY-EXAMINER: Cumming; William

ATTY-AGENT-FIRM: Jenkins & Gilchrist, PC

ABSTRACT:

A dialable directory number is assigned to a particular location area or cell area. A telecommunications user wanting to transmit user defined messages, such as a text message, to mobile stations within that location area or cell area transmits a signal encapsulating the message towards the assigned directory number. The transmitted signal is then routed through the conventional telecommunications network and delivered to the MSC providing mobile service to that particular location area or cell area. If the specified directory number is associated with a location area within a Public Land Mobile Network (PLMN), the serving MSC queries the attached visitor location register (VLR) to identify the mobile stations currently located within the specified location area. If the specified directory number is associated with a cell area, the serving MSC communicates with a base station controller (BSC) providing mobile service to that particular cell area. Thereinafter, the received message is transmitted using short message service (SMS)

messages to each of the mobile stations determined to be located within the specified geographic area.

21 Claims, 11 Drawing figures

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L28: Entry 3 of 4

File: USPT

Aug 3, 1999

US-PAT-NO: 5933816

DOCUMENT-IDENTIFIER: US 5933816 A

**** See image for Certificate of Correction ****

TITLE: System and method for delivering financial services

DATE-ISSUED: August 3, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zeanah; James	Thousand Oaks	CA		
Abbott; Charles	Santa Monica	CA		
Boyd; Nik	Los Angeles	CA		
Cohen; Albert	Los Angeles	CA		
Cook; James	Manhattan Beach	CA		
Grandcolas; Michael	Santa Monica	CA		
Lan; Sikhun	Los Angeles	CA		
Lindsley; Bonnie	Santa Clarita	CA		
Markarian; Grigor	Agoura	CA		
Moss; Leslie	Los Angeles	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Citicorp Development Center, Inc.	Los Angeles	CA			02

APPL-NO: 08/ 908413 [PALM]

DATE FILED: August 7, 1997

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS This application claims priority on Provisional Application Ser. No. 60/029,209, filed Oct. 31, 1996, now abandoned. Reference is made to a related patent application entitled "Method and System for Automatically Harmonizing Access to Software Application Program via Different Access Devices," Ser. No. 08/741,121, filed on Oct. 30, 1996, now U.S. Pat. No. 5,867,153.

INT-CL: [06] G06 F 17/60

US-CL-ISSUED: 705/35

US-CL-CURRENT: 705/35

FIELD-OF-SEARCH: 705/35, 705/39, 705/42, 705/43

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

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PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
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<input type="checkbox"/> <u>5025373</u>	June 1991	Keyser, Jr. et al.	380/24
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<input type="checkbox"/> <u>5794234</u>	August 1998	Church et al.	705/35

ART-UNIT: 275

PRIMARY-EXAMINER: Stamber; Eric W.

ATTY-AGENT-FIRM: Marcou; George T. Kilpatrick Stockton LLP

ABSTRACT:

A delivery system and method allow a financial institution to provide financial services to a plurality of remote devices, such as personal computers, personal data assistants, and screen phones. In addition to providing services to these remote devices, the system and method provide services to automatic teller machines (ATMs), external service providers, and internally within the financial institution to staff terminals and to the individual branches of the financial institution. The delivery of financial services is not limited to any particular network but rather may be provided through dial-in access, Internet access, on-line service provider access, or other types of delivery networks. The system is comprised of a set of reusable global components which are modular and are organized into services sets. By separating the components of the system into independent components, the system and method can be developed and tested on a component level rather than the entire system level, thereby substantially reducing the development and maintenance cycle time. The system and method operate in sessions and, for instance, employ a dialog component for gathering information from a customer, a rule broker component for providing answers to the various legal and regulatory rules in a particular country, a language man component for selecting appropriate language, a transaction executor component for performing transactions, and a presentation manager component for formatting outputs to the customer. The system and method provide state-of-the art interfaces with interface components and support legacy applications with legacy app bridge components.

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L39: Entry 1 of 2

File: USPT

Feb 2, 1999

US-PAT-NO: 5865470

DOCUMENT-IDENTIFIER: US 5865470 A

TITLE: Peel off coupon redemption card with microprocessor chip and tracking system

DATE-ISSUED: February 2, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Thompson; Kenneth	Ventura	CA	93003	

APPL-NO: 08/ 621484 [\[PALM\]](#)

DATE FILED: March 25, 1996

PARENT-CASE:

CROSS REFERENCES TO RELATED APPLICATIONS This is a continuation-in-part application of application No. 08/237,503 filed on Mar. 26, 1996, now U.S. Pat. No. 5,501,491, which is a continuation-in-part of application Ser. No. 07/884,962 filed on May 15, 1992, now U.S. Pat. No. 5,308,120, which is a continuation-in-part of application Ser. No. 07/881,542 filed on May 12, 1992 and which is currently U.S. Pat. No. Des. 343,332. The present application is also a continuation-in-part application of application Ser. No. 29/018,762 filed on Feb. 15, 1994 and which is still currently pending.

INT-CL: [06] [B42](#) [D](#) [15/00](#)

US-CL-ISSUED: 283/70; 283/51

US-CL-CURRENT: [283/70](#); [283/51](#)

FIELD-OF-SEARCH: 283/70, 283/67, 283/51, 283/81, 283/101, 283/105, 283/56, 283/115

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	5298731	March 1994	Ett	283/70
<input type="checkbox"/>	5308120	May 1994	Thompson	283/70
<input type="checkbox"/>	5501491	March 1996	Thompson	283/70

ART-UNIT: 372

PRIMARY-EXAMINER: Fridie, Jr.; Willmon

ATTY-AGENT-FIRM: Slehofer; Richard D.

ABSTRACT:

A coupon redemption card and tracking system includes a credit card size redemption coupon card used by the customer, and a tracking sheet used by the redemption center such as a restaurant. The redemption card has a plurality of mini coupons, which can be peeled off individually. Each redeemed coupon is affixed to a tracking sheet. The tracking system facilitates the accounting and inventory of redeemed coupons. The coupon card is formed as two laminated layers of special paper joined together by a layer of adhesive material, and a layer of clear plastic film on the top face of the card. The base layer is fabricated from a special paper. An adhesive coating is applied to one side of the base layer. The peel off coupon layer is affixed to the adhesive coating. The finished layered sheet is printed on both sides, die-cut on the coupon side, and then laminated with the film on the other side. Each coupon that is removed from the card has adhesive to adhere the coupon to the tracking sheet. The small size of the mini coupons is convenient for the card holder and the redemption center. The system can be used wherever one has to keep track of various redeemable coupons. A memory chip or a microprocessor chip is adhered to the card to form a memory smart card. The microprocessor chip is programmed to contain information about the card so that a chip reader can read the information about the card.

54 Claims, 40 Drawing figures

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L44: Entry 1 of 7

File: USPT

Sep 25, 2001

US-PAT-NO: 6295518

DOCUMENT-IDENTIFIER: US 6295518 B1

TITLE: System and method for emulating telecommunications network devices

DATE-ISSUED: September 25, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
McLain; John V.	Colorado Springs	CO		
Curnell; Damon	Colorado Springs	CO		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
MCI Communications Corporation	Washington	DC			02

APPL-NO: 08/ 987229 [\[PALM\]](#)

DATE FILED: December 9, 1997

PARENT-CASE:

CROSS-REFERENCE TO OTHER APPLICATIONS This patent application is related to the following commonly owned United States Patent Applications: 1. U.S. Patent Application titled, "System and Method for Performing Hybrid Preemptive and Cooperative Multi-Tasking in a Computer System," Ser. No. 08/987,633, by John V. McLain, Jr., and Damon Curnell, filed concurrently herewith; 2. U.S. Patent Application titled, "System and Method for Managing Computer System Resources Using Command Control Vectors," Ser. No. 08/987,849, by John V. McLain, Jr., and Damon Curnell, filed concurrently herewith; 3. U.S. Patent Application titled, "System and Method for Generating Responses to Inputs Using a Hybrid State Engine Table," Ser. No. 08/987,850, U.S. Pat. No. 5,974,532, by John V. McLain, Jr., and Damon Curnell, filed concurrently herewith; 4. U.S. Patent Application titled, "Method and Apparatus for Emulating a Dynamically Configured Digital Cross-Connect Network," Ser. No. 08/641,458, U.S. Pat. No. 5,809,286, by John V. McLain, Jr., and James Dellinger, filed May 1, 1996; 5. U.S. Patent Application titled, "Method and Apparatus for Emulating a Digital Cross-Connect Network," Ser. No. 08/641,459, U.S. Pat. No. 5,748,617, by John V. McLain, Jr., filed May 1, 1996; 6. U.S. Patent Application titled, "Method and Apparatus for Emulating Digital Cross-Connect Network using a Flexible Topology to Test MCS Network Management," by John V. McLain, Jr., filed May 1, 1996; 7. U.S. Patent Application titled, "Method and Apparatus for Emulating a Network of State Monitoring Devices," Ser. No. (08/672,141), U.S. Pat. No. 5,812,826, by John V. McLain, Jr., filed Jun. 27, 1996; 8. U.S. Patent Application titled, "Method and Apparatus for Simulating Multi-Tasking," Ser. No. 08/641,460, U.S. Pat. No. 5,850,536, by John V. McLain, Jr.; 9. U.S. Patent Application titled, "System, Method and Computer Program product for Digital Cross Connect Testing," Ser. No. 08/774,650, U.S. Pat. No. 5,954,829, by John V. McLain, Jr. and Dale W. Harris, filed Dec. 30, 1996; and 10. U.S. Patent Application titled, "Digital Cross Connect Command Script Generator," Ser. No. 08/774,651, U.S. Pat. No. 5,854,930, by John V. McLain, Jr., filed Dec. 31, 1996.

The above-listed applications are incorporated herein by reference in their entireties.

INT-CL: [07] G06 F 9/455

US-CL-ISSUED: 703/23; 703/13, 709/220, 709/223, 709/227, 712/208

US-CL-CURRENT: 703/23; 703/13, 709/220, 709/223, 709/227, 712/208

FIELD-OF-SEARCH: 709/220, 709/223, 709/224, 709/229, 709/230, 703/13, 703/21, 703/23, 703/27, 712/208

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>5027343</u>	June 1991	Chan et al.	370/250
<input type="checkbox"/>	<u>5060140</u>	October 1991	Brown et al.	710/105
<input type="checkbox"/>	<u>5406557</u>	April 1995	Baudoin	370/407
<input type="checkbox"/>	<u>5446736</u>	August 1995	Gleeson et al.	370/473
<input type="checkbox"/>	<u>5475683</u>	December 1995	Harrison et al.	370/332
<input type="checkbox"/>	<u>5490134</u>	February 1996	Fernandes et al.	370/466
<input type="checkbox"/>	<u>5491800</u>	February 1996	Goldsmith et al.	709/221
<input type="checkbox"/>	<u>5535198</u>	July 1996	Baker et al.	370/426
<input type="checkbox"/>	<u>5579476</u>	November 1996	Cheng et al.	714/32
<input type="checkbox"/>	<u>5675771</u>	October 1997	Curley et al.	703/23
<input type="checkbox"/>	<u>5732213</u>	March 1998	Gessel et al.	709/224
<input type="checkbox"/>	<u>5774695</u>	June 1998	Autrey et al.	709/227
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<input type="checkbox"/>	<u>5897609</u>	April 1999	Choi et al.	702/122
<input type="checkbox"/>	<u>5974532</u>	October 1999	McLain et al.	712/208
<input type="checkbox"/>	<u>5983012</u>	November 1999	Bianchi et al.	703/23

ART-UNIT: 213

PRIMARY-EXAMINER: Teska; Kevin J.

ASSISTANT-EXAMINER: Broda; Samuel

ABSTRACT:

A system, method and computer program product for emulating a telecommunications network by simultaneously emulating multiple independent activities normally performed by multiple network devices in a telecommunications network. includes a network interface for communicating with a control system, a user interface for accepting user input and for providing user output, a command response manager for reading control system commands and for formulating intelligent responses, a script interpreter for executing scripts, a script database containing data from actual network devices for use by the scripts, a database manager for performing database functions and a multi-tasking system manager for controlling these logical components and for interacting with an operating system of a host computer to provide for invoking and terminating various processes. The system provides both script and non-script responses to a control system in order to emulate digital matrix switches. Script responses preferably work in conjunction with databases that contain data from actual network devices and data provided by control systems to generate more realistic responses. Preferably, a hybrid preemptive and cooperative multi-tasking controller is employed for processing a number n of logical units of work for a task before interrupting. The system, method and computer program product can be implemented on a standard PC. The present invention emulates the communications protocol of TNDs via the network interface module. Preferably, the network interface module communicates with a control system via an X.25 interface. Preferably, the control system utilizes Message Transfer Protocol (MTP) over an X.25 network. Other communications protocols can be employed as well.

23 Claims, 16 Drawing figures

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L44: Entry 1 of 7

File: USPT

Sep 25, 2001

DOCUMENT-IDENTIFIER: US 6295518 B1

TITLE: System and method for emulating telecommunications network devices

Application Filing Date (1):

19971209

Brief Summary Text (9):

In order to adequately test a control system, a system, method and computer program product for simulating telecommunication network devices is needed. Simulation should include emulation of network device functionality in the context of receiving commands and data from a control system and formulating intelligent responses. Simulation should also include emulation of intelligent device processing. Intelligent processing comprises performance of certain tasks such as database manipulation and formulation of responses to commands. Simulation should also include emulation of the volumes of message processing that is typically carried out by a network.

Detailed Description Text (72):

After a response is generated, command response manager 216 can take additional action based on the contents of any remaining command response table fields. For example, if there is an entry in repeat field 1424, command response manager 216 repeats sending of the response until a threshold is met. If there is an entry in next response field 1418, command response manager 216 positions the message pointer to the table entry pointed to and then chains the response to the last response sent. Command response manager 216 then restarts message generation. If there is an entry in next condition field 1422, command response manager sets a conditional flag and waits for the next inbound message. On subsequent messages, if the condition flag is raised, command response manager 216 conducts a specific search for selection criteria using entries chained to the next condition field until a match is found or until the search is exhausted. If there is an entry in next command field 1420, command response manager 216 sets a next command flag and waits for the next inbound message. If the next command flag is raised, command response manager 216 generates the response using the response text and restarts message generation.

Detailed Description Text (117):

Statements are composed of a token and a list of operands. A token is the nucleus of the statement. The token describes how script interpreter 218 will act on the operands in the statement's operand list. Operands are linked together to form an operand list or expression. Expressions are resolved from left to right. A sequence number is used for debugging a script and represents the actual line number in which the statement was actually stored in the script source file. Conditional tokens, such as "while" and "if", store an optional field branch that contains a pointer to the statement where program execution should continue if the expression evaluates to false.

Detailed Description Text (159):

In alternative embodiments, secondary memory 1608 can include other similar means for allowing computer programs or other instructions to be loaded into computer system 1601. Such means can include, for example, a removable storage unit 1622 and

an interface 1620. Examples of such can include a program cartridge and cartridge interface (such as that found in video game devices), a removable memory chip (such as an EPROM, or PROM) and associated socket, and other removable storage units 1622, and interfaces 1620 which allow software and data to be transferred from the removable storage unit 1622 to computer system 1601.

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L39: Entry 2 of 2

File: USPT

Sep 22, 1998

DOCUMENT-IDENTIFIER: US 5812400 A

TITLE: Electronic postage meter installation and location movement system

Application Filing Date (1):19960823Drawing Description Text (5):

FIG. 3 is a flow chart of the operation of the meter system shown in FIG. 1 in determining whether the portable means (shown as a smart card) contains the proper location data or other data employed in generating digital tokens;

Detailed Description Text (6):

The metering system shown in FIG. 1 includes an internal secure accounting system that may be physically mounted in the metering system at the time of manufacture. This internal secure accounting system may be a smart card permanently mounted in the metering system or the smart card chip without the larger housing of the card itself. Such an accounting system itself may be housed within its own secure housing such as is the case with a smart card chip or by means of a separate secure housing system. The smart card chip may consist of the smart card trimmed down to essentially a smaller version of the smart card. This may be manufactured by using a smart card plastic substrate that can be punched out from its carrier after the smart card chip is attached and thereafter the punched-out smart card chip mounted in the meter system. The punched-out smart card chip is like a normal smart card with most of the plastic substrate removed. The larger plastic substrate normally provides no functionality except to conform to the size requirements of the normal credit card and to position the chip on the plastic credit card. Since the smart card chip is devoted to being permanently mounted internally within the metering system, the smaller size is a benefit. That is, the punched-out smart card chip is never removed from the meter to be used in other non metering applications outside of the metering system except as explained herein. This smart card chip is an integrated circuit housed in a plastic holder which is then connected to the printed circuit board. It should be recognized that the integrated circuit itself can be directly mounted to the circuit board if desired or packaged in other integrated circuit formats.

Detailed Description Text (7):

The smart card chip may be permanently mounted within the appropriate printed circuit connector (plug removable) or designed to be mounted directly on a meter system printed circuit board. Additionally, the metering system accommodates an external secure portable accounting system (for example, smart card) as well as the internal securing accounting system (for example, smart card) thereby providing additional advantages. Thus, manufacturing of economics of scale are achieved because identical or similar smart card chips or other devices are used for the external and the internal accounting system.

Detailed Description Text (11):

Because the metering system employs multi secure accounting systems, an internal accounting system and an external accounting system, the metering system includes a

prioritization arrangement to determine which accounting system should be used for debiting and crediting activity. Any time two accounting systems are present, a user wanting to print an indicia or digital token could enter postage value and debit the active accounting system. The metering system provides the capability for a system where many external accounting systems may be employed by a single metering system. The metering system includes a portable device connector which enables funds debiting, token retrieval, funds audit and crediting of multiple accounting systems. Depending upon the meter system configuration of the number and type of secure accounting systems, internal to the metering system or external to the metering system, a selection criteria is used to choose the active accounting system. The possible configurations in the metering system shown in FIG. 1 include an internal secure accounting system only, an external secure accounting system only and an internal and (optional) external secure accounting systems. In the case where there are both an internal and optional external accounting system, a choice must be made as to which accounting system should be used when both accounting systems are present in the metering system.

Detailed Description Text (12):

The metering system shown in FIG. 1 accommodates the generation of digital tokens by both the internal and external secure accounting systems. Since the indicia includes the digital token and/or other information (as for example the information set forth in the proposed U.S. Postal Service Specifications), it is necessary to insure for a valid mailpiece to be prepared that the proper accounting system information is utilized in generating the digital token and that such digital token is employed in printing the mailpiece. This is necessary for the mailpiece to properly be put into the mail stream by the mailer and so that the carrier service may properly authenticate the mailpiece.

Detailed Description Text (13):

Digital tokens to be printed by the metering system 2 may include information which is in part based on the licensing Post Office zip code or other location information related to the meter user, hereinafter referred to as origin postal code. Currently, postage meter secure accounting systems which generate digital tokens are mounted within a meter base housing. This prevents the accounting system from being moved between meter bases.

Detailed Description Text (14):

When an indicia is printed, digits are generated that utilize forms of the origin postal code that are then printed as part of the indicia. These digital tokens are then used to verify the correctness and validity of portions of the digital indicia. Since historically, there is only a single vault (accounting system) and a single printing engine and the system is not easily portable (as a smart card), meter location movement has not been as serious an issue. With portable external accounting system meters, however, it is quite easy to move and use a portable secure accounting system between many printing engines "bases" spanning different postal regions (origin postal codes). The present system helps assure that the secure accounting system utilizes the correct postal code related data when generating the secure digital tokens or indicia.

Detailed Description Text (15):

Moreover, in a metering system such as shown in FIG. 1 that provides the capability of supporting more than a single secure accounting system, such as plural portable external accounting systems which may be from different origin postal codes, the meter system operates to update the packed postal code (origin postal code with any desired additional data) and the postal check digit that may be used by the vault to generate the secure digital tokens. The system shown in FIG. 1 stores target origin postal codes and operates to detect and transfer the origin postal codes to the secure accounting system to assure correct generation of the digital tokens.

Detailed Description Text (16):

The digital indicia or digital token contains an area of secure information that is used to verify the correctness and authenticity of the digital indicia. For example, these digital tokens may include the vendor ID, vendor digital token, postal digital token, and an indicia check digit. In encryption systems of this type, in order to correctly generate the indicia check digit, vendor digital token, postal digital token, the packed postal code and the postal check digit for the origin postal code may be used. The origin postal code is usually the code associated with where the mailpiece will be sent from. This has also usually indicated where the meter is located. However, in products which separate the vault from the printing engine or "base," the vault can easily be moved from one origin postal code location to another. The packed postal code is derived from the origin postal code and it is used to represent the origin postal code in the calculation of the digital tokens mentioned above. The postal check digit represents the contribution of the origin postal code to the indicia check digit.

Detailed Description Text (18):

To insure correctness of the token generation, a master set of the origin postal code along with its associated packed postal code and postal check digit are stored within the base printing module. The initialization of this information occurs the first time the meter system user contacts the manufacturer for the initial refill of the secure accounting system with postage funds. At this first refill, the meter system recognizes it needs all of the postal code related data and electronically requests the data be downloaded to memory. At this time, the system will update the currently active secure accounting system in the meter system. The active secure accounting system could be either embedded within the meter system (internal accounting system) or inserted into the meter system connector. Anytime, an accounting system is inserted into the metering system, the meter system operates to determine whether the secure accounting system possesses the same postal check digit that is stored as the master postal check digit stored in the memory of the printing module (or where ever else in the base this information may be stored). If the postal check digits match no update is made. This is done to minimize the number of writes to nonvolatile memory of the secure accounting system. The nonvolatile memory in the meter system may have a maximum number of write cycles before the memory starts to degrade. This number correlates to the maximum of number debits made against the meter and consequently the maximum number of times that tokens will be generated.

Detailed Description Text (23):

A smart card chip 18 which contains internal nonvolatile storage receives encrypted command and control signals from the base unit and provides information to the ASIC 20 to operate the printhead driver 14. The ASIC, may be of the type described in copending U.S. patent application Ser. No. 08/554,179 filed Nov. 6, 1995 entitled MAIL HANDLING APPARATUS AND PROCESS FOR PRINTING AN IMAGE COLUMN-BY-COLUMN IN REAL TIME and assigned to Pitney Bowes, Inc., the disclosure of which is hereby incorporated by reference. The ASIC is connected to a crystal clock 22, obtains the necessary operating program information from a ROM or flash memory 24 so as to appropriately control the sequence of the information to the ink printhead driver such that the printhead produces a valid and properly imprinted indicia (which herein is meant to include a digital token in whatever format it is to be imprinted).

Detailed Description Text (30):

The metering system 2 employs two accounting systems. The first accounting system involves the internal smart card (or smart card chip) 8 and the second accounting system involves an external smart card 10. These smart cards are micro processor based devices which each provide for secure metering functionality. These smart card accounting systems or smart card vault systems securely maintain various registers associated with the metering system and provide the meter accounting functionality. Additionally, the accounting systems provide for the capability of communicating register information and postage refilling and removal information to

add or remove value from the various accounting registers. Each of the secure accounting systems generate the indicia and/or digital tokens needed to be imprinted on a mailpiece by the printhead 12. Additionally, the modules provide for encrypted communications into and out of the accounting system such as may be associated with the funds refilling or funds debiting function. For the particular embodiment shown, the accounting system provides for authentication of the printhead module smart card 18 and the accounting system. Whenever there is a request by a user through the keypad 62 or otherwise, to print postage, or whenever else it is desired, a mutual authentication occurs. The accounting system authenticates that it is in communication with a printhead module smart card chip 18, each authenticating the other as being authentic and valid meter, manufacturer system. Thereafter encrypted communications are enabled between the active secure accounting system and the smart card chip 18 which is part of the printing system to provide security that the messages are authorized uncorrupted messages. This may be by way of a cryptographic certificate.

Detailed Description Text (38):

In generating digital tokens or indicia, in certain instances and for certain postal authorities, the digital token is required to contain information concerning the physical location of the electronic postage of the metering system. This may be because of licensing requirements wherein a particularly meter is licensed to be operated in a particular location, as for example within a particular zip code area, the originating postal code of the mailer. The metering system 2 accommodates this requirement and enables the utilization of an external smart card from originating zip locations other than that of the license location for the metering system 2. The meter location information may also be important where it is required for use when metered mail must be deposited within the zip code or originating location of the mailer.

Detailed Description Text (39):

In initialization of the meter, that is when the meter is put into service and rendered operable, the location of the metering system 2 is stored in the print module memory 24 or the internal memory of chip 18. This information may be the originating zip code for the mailer or other required location or other information. The information in the flash memory 24 or the smart card chip 18 is employed in imprinting a indicia or digital token on a mail piece by print head 12. It is necessary that the digital token generated either by the external smart card 10 or the internal accounting module 8 be such that the digital token which contains originating postal code data be such that it is accurate and consistent with the data stored in the flash memory 24 or smart card chip 18 internal memory.

Detailed Description Text (40):

At the time of initialization, the originating location data may be also stored in the internal accounting system 8. When an external accounting system or smart card 10 is connected into the system, and a request for postage is initiated, as part of the authentication process, communication is established between the external accounting system 10 and the print head smart card chip 18. At that time, a comparison is made between the originating location information stored in the flash memory 24 or smart card chip 18 internal memory and the originating location information stored in the external smart card 10. If there is a correspondence between these two stored location information, the printing of postage and generation of the digital token or indicia may proceed in the normal fashion with any other authentication and processing that may be employed. However, if the location information stored in the flash memory 24 or smart card chip 18 internal memory is inconsistent with the location information stored in the external smart card 10, the system will not operate. At this time, the location information in the external smart card is written over or alternatively may be put in a separate memory location (a travel memory location). Correspondence now exist between the location information stored in the flash memory 24 or smart card chip 18 internal memory and the location information stored in the external smart card 10. Thus,

when imprinting postage and generating digital tokens an agreement exists between the data generated on the mail piece from the location information in the flash memory, 24 or smart card chip, 18 internal memory and from the location information stored in the external smart card 10.

Detailed Description Text (51):

The printable postal code is often a necessary component of a correct indicia. The packed postal code and the postal check digit may be used in the generation of digital tokens that are also printed in the indicia. These tokens are used to verify the correctness and the authenticity of the indicia.

Detailed Description Text (72):

Post Office realigns existing accountable Post Offices. Over the life of the meter, it is possible that the United States Post Office will realign their accountable Post Offices. For meters that are effected by this change, a method must exist in order to update the new postal code. The system provides a system whereby the meter manufacturer is able to initiate the zip code download either before or after a Customer invoked postage funds refill, remote meter resetting. Furthermore, when realignment occurs, it has required the manufacturers Customer Service to intervene in order to update the Customer's meters. The present system eliminates that need and performs the entire operation electronically.

Detailed Description Text (78):

When the Customer receives the meter system, there is no postage in the meter system. This will require the Customer to invoke a refill session to obtain postage funds. At the time of this first refill, the meter is able to detect that parameters are not present in the system that are needed to properly print an indicia. Upon connection to the remote meter resetting system data center, the meter requests the initialization of the needed data. When the data is received, the meter is then prepared to properly print an indicia. Consequently, the meter becomes enabled to print. To print a valid indicia, digital tokens, from the vault, the postage amount, optionally the date of submission and the origin postal code usually must be printed. However, as cited above, many encrypted indicias that include digital token may have all forms of different data and in different forms utilized or not utilized, as the case may be, for that particular system. Since the meter's destination is not known at the time of manufacturing, a mechanism is provided to initialize the origin postal code so that valid indicias can be printed.

Detailed Description Text (80):

In order to print a valid indicia, in certain systems a postage vault capable of generating digital tokens, may need a mechanism to set and maintain the time of day as well as a calendar and the origin postal code. This data may be needed to generate a valid indicia. Since the meter's destination is not known at the time of manufacturing, a mechanism is provided to initialize the meter with the necessary data to support valid indicia generation.

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L58: Entry 1 of 1

File: PGPB

Jun 7, 2001

PGPUB-DOCUMENT-NUMBER: 20010003099
PGPUB-FILING-TYPE: new-utility
DOCUMENT-IDENTIFIER: US 20010003099 A1

TITLE: EVALUATION OF RESPONSES OF PARTICIPATORY BROADCAST AUDIENCE WITH PREDICTION OF WINNING CONTESTANTS; MONITORING, CHECKING AND CONTROLLING OF WAGERING, AND AUTOMATIC CREDITING AND COUPONING

PUBLICATION-DATE: June 7, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
VON KOHORN, HENRY	VERO BEACH	FL	US	

APPL-NO: 09/ 088148 [PALM]
DATE FILED: June 1, 1998

CONTINUED PROSECUTION APPLICATION: CPA

RELATED-US-APPL-DATA:

Application 09/088148 is a continuation-in-part-of US application 08/226073, filed April 11, 1994, US Patent No. 5759101
Application 08/226073 is a continuation-in-part-of US application 08/025397, filed February 25, 1993, US Patent No. 5508731
Application 08/025397 is a continuation-in-part-of US application 07/763672, filed September 19, 1991, US Patent No. 5283734
Application 07/763672 is a continuation-in-part-of US application 07/603882, filed October 25, 1990, US Patent No. 5057915
Application 07/603882 is a continuation-in-part-of US application 07/424089, filed October 19, 1989, US Patent No. 5034807
Application 07/424089 is a continuation-in-part-of US application 07/192355, filed May 10, 1988, US Patent No. 4926255
Application 07/192355 is a continuation-in-part-of US application 06/837827, filed March 10, 1986, US Patent No. 4745468

INT-CL: [07] A63 F 9/24

US-CL-PUBLISHED: 463/40; 463/16

US-CL-CURRENT: 463/40; 463/16

REPRESENTATIVE-FIGURES: 1

ABSTRACT:

A system and method for evaluating responses to broadcast programs, such as television programs, include an instructional signal modulated onto a signal

transmitted concurrently with the television program, simulcast, or time-multiplexed with a television. At each of a plurality of remote receiving stations, one or more members of a remote audience has the opportunity to respond to a situation presented in the television program by entering a response on a keyboard. The system includes response evaluation circuitry which may be located at a central facility or partially at the central facility and partially at each remote receiving station, or completely within a response unit at each remote receiving station, in the latter case the response unit having a memory responsive to the instructional signal for storing acceptable responses, a comparison circuit for comparing responses entered at the keyboard with those stored in the memory, circuitry for scoring responses in accordance with commands from the instructional signal, and a recording device for providing a permanent record of the audience score at the remote station. For conducting a sweepstakes, numbers or other responses are entered at the remote stations and are stored at a central facility for verification. The program may be presented live conducted by a host at a central station, or by a prerecorded message accessible by telephone from a remote station with regulation from a central station, and members of the remote audience may predict or select winning contestants.

[0001] This application is a continuation-in-part of copending application Ser. No. 08/226,073 filed Apr. 11, 1994 which is a continuation-in-part of application Ser. No. 08/025,397 filed Feb. 25, 1993, now U.S. Pat. No. 5,508,731, which is a continuation in part of application Ser. No. 07/763,672 filed Sep. 19, 1991, now U.S. Pat. No. 5,283,734, which is a continuation in part of application Ser. No. 07/603,882 filed Oct. 25, 1990, now U.S. Pat. No. 5,057,915, which is a continuation-in-part of application Ser. No. 07/424,089 filed Oct. 19, 1989, now U.S. Pat. No. 5,034,807, which is a continuation-in-part of application Ser. No. 192,355, filed May 10, 1988, now U.S. Pat. No. 4,926,255, which is continuation-in-part of application Ser. No. 837,827 filed Mar. 10, 1986, now U.S. Pat. No. 4,745,468. Related material is found in U.S. Pat. No. 4,876,592 which is also a continuation-in-part of said application Ser. No. 837,827.

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L58: Entry 1 of 1

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TITLE: EVALUATION OF RESPONSES OF PARTICIPATORY BROADCAST AUDIENCE WITH PREDICTION OF WINNING CONTESTANTS; MONITORING, CHECKING AND CONTROLLING OF WAGERING, AND AUTOMATIC CREDITING AND COUPONING

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INVENTOR-INFORMATION:

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APPL-NO: 09/ 088148 [\[PALM\]](#)

DATE FILED: June 1, 1998

CONTINUED PROSECUTION APPLICATION: CPA

RELATED-US-APPL-DATA:

Application 09/088148 is a continuation-in-part-of US application 08/226073, filed April 11, 1994, US Patent No. 5759101

Application 08/226073 is a continuation-in-part-of US application 08/025397, filed February 25, 1993, US Patent No. 5508731

Application 08/025397 is a continuation-in-part-of US application 07/763672, filed September 19, 1991, US Patent No. 5283734

Application 07/763672 is a continuation-in-part-of US application 07/603882, filed October 25, 1990, US Patent No. 5057915

Application 07/603882 is a continuation-in-part-of US application 07/424089, filed October 19, 1989, US Patent No. 5034807

Application 07/424089 is a continuation-in-part-of US application 07/192355, filed May 10, 1988, US Patent No. 4926255

Application 07/192355 is a continuation-in-part-of US application 06/837827, filed March 10, 1986, US Patent No. 4745468

INT-CL: [07] [A63](#) [F](#) [9/24](#)US-CL-PUBLISHED: [463/40](#); [463/16](#)US-CL-CURRENT: [463/40](#); [463/16](#)

REPRESENTATIVE-FIGURES: 1

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A system and method for evaluating responses to broadcast programs, such as television programs, include an instructional signal modulated onto a signal

transmitted concurrently with the television program, simulcast, or time-multiplexed with a television. At each of a plurality of remote receiving stations, one or more members of a remote audience has the opportunity to respond to a situation presented in the television program by entering a response on a keyboard. The system includes response evaluation circuitry which may be located at a central facility or partially at the central facility and partially at each remote receiving station, or completely within a response unit at each remote receiving station, in the latter case the response unit having a memory responsive to the instructional signal for storing acceptable responses, a comparison circuit for comparing responses entered at the keyboard with those stored in the memory, circuitry for scoring responses in accordance with commands from the instructional signal, and a recording device for providing a permanent record of the audience score at the remote station. For conducting a sweepstakes, numbers or other responses are entered at the remote stations and are stored at a central facility for verification. The program may be presented live conducted by a host at a central station, or by a prerecorded message accessible by telephone from a remote station with regulation from a central station, and members of the remote audience may predict or select winning contestants.

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L31: Entry 3 of 6

File: USPT

Apr 18, 2000

DOCUMENT-IDENTIFIER: US 6052591 A

**** See image for Certificate of Correction ****

TITLE: Broadcasting messages to mobile stations within a geographic area

Abstract Text (1):

A dialable directory number is assigned to a particular location area or cell area. A telecommunications user wanting to transmit user defined messages, such as a text message, to mobile stations within that location area or cell area transmits a signal encapsulating the message towards the assigned directory number. The transmitted signal is then routed through the conventional telecommunications network and delivered to the MSC providing mobile service to that particular location area or cell area. If the specified directory number is associated with a location area within a Public Land Mobile Network (PLMN), the serving MSC queries the attached visitor location register (VLR) to identify the mobile stations currently located within the specified location area. If the specified directory number is associated with a cell area, the serving MSC communicates with a base station controller (BSC) providing mobile service to that particular cell area. Thereinafter, the received message is transmitted using short message service (SMS) messages to each of the mobile stations determined to be located within the specified geographic area.

Application Filing Date (1):

19960819

Brief Summary Text (5):

With the introduction of the Global System for Mobile (GSM) communication and the Personal Communications System (PCS), a number of advanced subscriber features and applications are provided to mobile subscribers. One such application is the communication of unstructured data between a mobile station and a serving mobile telecommunications network. Messages like Short Message Service (SMS) messages are utilized to communicate text or unstructured data between a serving mobile switching center (MSC) and a mobile station. Using SMS messages, the serving MSC can transmit text information to the mobile station and have the mobile station store the received text information in an associated register, such as an attached Subscriber Identity Module (SIM) card. The text messages encapsulated within the received SMS messages can then be displayed to the mobile user for user interaction.

Brief Summary Text (6):

Another example of unstructured data communications comprises the Unstructured Supplementary Service Data (US:SD) message. Using USSD messages, a mobile telecommunications network is also able to transparently communicate text data with a mobile station. For example, a mobile station can receive and display text messages on an attached display unit and subsequently return a reply message back to the mobile network.

Brief Summary Text (7):

Conventionally, SMS and USSD messages can be utilized to communicate unstructured data, e.g., user defined text messages, from a mobile telecommunications network to a particular mobile station or to all mobile stations traveling within a particular

mobile switching center (MSC) coverage area. As a result, in order to communicate messages to mobile stations located within a certain geographic area, the mobile telecommunications network must individually identify and specify the Mobile Subscriber Integrated Service Digital Network (MSISDN) number associated with each of the targeted mobile stations and sequentially transmit a message to the specified mobile stations. As an alternative, the serving MSC can also blindly transmit broadcast messages to all mobile stations located within its MSC service area.

Brief Summary Text (9):

Accordingly, there is a need to enable the mobile telecommunications network to selectively broadcast connection-less signals, such as SMS or USSD messages, to mobile stations located within a particular geographic area.

Brief Summary Text (12):

Utilizing the specified unique identification number as destination address, a signal encapsulating data to be transmitted to the mobile stations located within that particular geographic area is routed to the MSC or BSC associated with that unique identification number. If the unique identification number is associated with a particular MSC, it is further analyzed to determine which location area is associated with the received unique identification number. After making such a determination, the serving MSC performs a query with the associated visitor location register (VLR) to identify the mobile stations located within the specified location area. Thereinafter, a Short Message Service (SMS) or Unstructured Supplementary Service Data (USSD) message encapsulating the received data is transmitted to each of the identified mobile stations.

Brief Summary Text (13):

If the received unique identification number is associated with a BSC, the associated MSC sends the data to the serving BSC. The serving BSC then determines the particular cell area represented by the received unique identification number and further identifies the mobile stations located within the determined cell area. Thereinafter, the serving BSC or the MSC transmits an SMS or USSD message encapsulating the received data to each of the mobile stations located within the identified cell area.

Drawing Description Text (7):

FIG. 5 is a block diagram illustrating the routing of a Short Message Service (SMS) message within a PLMN;

Drawing Description Text (8):

FIG. 6 is a block diagram illustrating the routing of a Unstructured Supplementary Service Data (USSD) message within a PLMN;

Drawing Description Text (9):

FIG. 7 is a block diagram illustrating the broadcasting of SMS messages to mobile stations located within a particular location area;

Drawing Description Text (10):

FIG. 8 is a block diagram illustrating the broadcasting of SMS messages to mobile stations located within a particular location area without performing a home location register (HLR) interrogation;

Drawing Description Text (11):

FIG. 9 is a block diagram illustrating the broadcasting of SMS messages from the serving base station controller (BSC) to mobile stations located within a particular cell area;

Drawing Description Text (12):

FIG. 10 is a block diagram illustrating the broadcasting of SMS messages from the

serving mobile switching center (MSC) to mobile stations located within a particular cell area; and

Drawing Description Text (13):

FIG. 11 is a block diagram illustrating the broadcasting of USSD messages from the serving MSC to mobile stations located within a particular service area; and

Detailed Description Text (2):

FIG. 1 is a block diagram of a telecommunications network including a Public Land Mobile Network (PLMN) 10 for providing mobile service to a mobile station 20. Whenever the mobile station 20 travels into a particular mobile switching center (MSC) coverage area, a visitor location register (VLR) 30 associated with the serving MSC 40 copies into its memory the relevant subscriber information from the home location register (HLR) 50 associated with that particular mobile subscriber. Thereinafter, whenever the mobile station 20 originates an outgoing call, the radio signal 60 requesting an outgoing call setup is received by the base station controller (BSC) 70 connected to the serving MSC 40. The received request is then forwarded to the serving MSC 40 who, in turn, processes the call setup request with the help of the subscriber information stored in the VLR 30. If the outgoing call connection is towards a wireline terminal 80, the call setup signal, such as an Initial Address Message (IAM) signal, is then transmitted from the serving MSC 40 to the connected Public Switched Telephone Network (PSTN) 90 to establish the call connection.

Detailed Description Text (7):

Signaling for telecommunications services is normally performed in a structured way. For example, specific predefined data, formats, and signals names are used to setup a speech connection, to perform handovers, and to authenticate mobile subscriber information when providing telecommunications service to a mobile subscriber. With the introduction of the Global System for, Mobile (GSM) communications and the Personal Communications System (PCS), a number of new and advanced supplementary services are being provided to mobile subscribers. Since these supplementary services utilize user specified data, there are no structured ways to communicate these data between a serving Public Land Mobile Network (PLMN) and a mobile station. As a result, a number of unstructured message protocols have been developed for the GSM or PCS environment. One such protocol is the Short Message Service (SMS) protocol for one-way transporting of information between a PLM and a mobile station. Another protocol is Unstructured Supplementary Service Data (USSD) which has been introduced to enable user interaction between GSM PLMN applications and a mobile station in a transparent way through the mobile telecommunications network. It is transparent because no review or manipulation of the contents of the message is performed during transportation.

Detailed Description Text (8):

Reference is now made to FIG. 5 where a block diagram illustrating the communication of a Short Message Service (SMS) message between a Short Message Service Center (SMS-C) 180 and the mobile station 20 is shown. The SMS-C 180 receives a string of alphanumeric characters to be transmitted to the mobile terminal 20. Such characters can be received from another telecommunications terminal or from a service operator. The SMS-C 180 encapsulates the entered character data into a packet message, such as Signaling System No. 7 (SS7) signals or X.25 protocol packets, and routes the message to a Short Message Service--Gateway Mobile Switching Center (SMS-GMSC) 190 within a PLMN 10 serving the mobile station 20. In a manner similar to the routing of an incoming call within a PLMN as described in FIG. 1, the SMS-GMSC 190 interrogates the home location register (HLR) 50 associated with the mobile station 20 for routing information (i.e., an identification of where the mobile station 20 is currently located) and subsequently routes the message to a Mobile Switching Center (MSC) 40 serving the mobile station's current location. The mobile station 20 is paged and a connection is set up between the mobile station 20 and the PLMN network 10. If the mobile

station 20 is already busy, the connection setup is not performed because the network already knows that the mobile station 20 is accessible. If the connection has been successful, and thereby the mobile station 20 is authenticated, the MSC 40 encapsulates the character data into an SMS message 210 and delivers the SMS message 210 to the mobile station 20 over one of the control data channels via a connected base station controller (BSC) 70. A control data channel such as a Stand-alone Dedicated Control Channel (SDCCH) is used instead of a traffic channel (TCH) to allow connection-less data communications. After receiving the SMS message 210 encapsulating the character data, the mobile station 20 acts merely as a buffer and passes the data to the attached Subscriber Identity Module (SIM) card 200. The SIM card 200 then stores the received data into an internal buffer or memory register. Lastly, if the delivery has been successful, a successful delivery report is sent back from the MS 20 to the serving MSC 40, and subsequently from the serving MSC 40 to the SMS-C 180. Otherwise, a failure report is generated.

Detailed Description Text (9):

By utilizing SMS messages and an SIM card, a subscriber feature provider within a telecommunications network can deliver the latest subscriber feature information to the mobile station 20 without requiring the mobile station 20 to be taken in for manual service. For example, whenever the mobile subscriber adds or deletes a new number from his speed dialing subscriber feature, the feature provider can remotely update the mobile station 20 with the mobile subscribers latest speed dialing lists or options without inconveniencing the mobile subscriber. An application module associated with the mobile station 20 can further process and display the received data on a display unit attached to the mobile station 20 for user interaction.

Detailed Description Text (10):

FIG. 6 is a block diagram illustrating the communication of a USSD message 220 between a USSD external node user 250 and a mobile station 20. USSD messages are utilized by the mobile telecommunications network to transport user defined data to a mobile station 20 or an application module within the mobile station 20. Therefore, instead of storing the received character data into an SIM card, the received data are either directly manipulated by the feature application modules within the receiving mobile station 20 to provide special subscriber feature functions or displayed on a display unit for user interaction. Therefore, two parties within a mobile telecommunications network can utilize USSD messages to communicate text messages back and forth without establishing a speech connection.

Detailed Description Text (11):

The external node user 250, such as another telecommunications terminal or service provider, transmits a USSD message encapsulating the character data to the HLR 50 within the serving PLMN 10. The HLR 50 is associated with a number of different MSCs within the same PLMN 10. As the mobile station 20 travels from one MSC area to another, the HLR 50 receives location update signals and keeps record of the mobile station's current location. Whenever a USSD signal is received by the HLR 50, the HLR 50 ascertains the current location of the mobile station 20. A first USSD handler 230 within the HLR 50 thereafter transparently forwards the USSD signal to the appropriate MSC 40 currently serving the mobile station 20. A second USSD handler 240 within the serving MSC 40 receives the transmitted message and transports the USSD message 220 to the mobile station 20 over a connection-less communications link via a connected BSC 70. A third USSD handler 260 within the mobile station 20 then receives the transmitted USSD message 220, extracts the encapsulated character data, and forwards the extracted data to the appropriate application module. One example of such an application module is a user interface module for displaying the received character data onto a display unit attached to the mobile station 20.

Detailed Description Text (12):

Conventionally, SMS and USSD messages are utilized to communicate user defined text messages from a telecommunications device within a telecommunications network to a

particular mobile station or to all mobile stations traveling within a particular mobile switching center (MSC) coverage area. As a result, in order to communicate messages to mobile stations located within a certain geographic area, the telecommunications device generating the messages must inefficiently and inconveniently identify and specify the Mobile Subscriber Integrated Service Digital Network (MSISDN) number associated with each of the targeted mobile stations and sequentially transmit a message to the specified mobile stations. In order to avoid sequentially sending the message to each mobile station, as an alternative, the serving MSC can blindly transmit broadcast messages to all mobile stations located within its MSC service area.

Detailed Description Text (13):

Reference is now made to FIG. 7 illustrating the broadcasting of SMS messages to mobile stations located within a particular location area in accordance with the present invention. In accordance with the teachings of the present invention, a Mobile Subscriber Integrated Service Digital Network (MSISDN) number is assigned to a particular geographic area and associated with a telecommunications device serving that particular geographic area (FIG. 12, step 505). Thereinafter, whenever a telecommunications user wishes to transmit a message to all mobile stations located within the designated geographic area (FIG. 12, step 510, an SMS message encapsulating the message is routed utilizing the MSISDN number assigned to that particular geographic area as the destination address. For example, the SMS-C 180 receives a request to transmit an SMS message towards the MSISDN number associated with a particular location area. Not knowing that the specified MSISDN number represents a geographic location instead of a mobile station, the message is first routed to the SMS-GMSC 190 serving that particular PLMN 10 (FIG. 12, step 515). In a manner similar to the routing of a normal incoming SMS message, the SMS-GMSC 190 requests a routing instruction from the HLR 50 associated with the specified MSISDN number (signal 310.paren close-st.; FIG. 12, step 520). The HLR 50, storing a record specifying that the specified MSISDN number is being served by a particular MSC 40, further transmits a roaming number request towards the serving MSC 40 (signal 320.paren close-st.; FIG. 12, step 525). Up to this process, no entity or device within the PLMN has determined that the specified MSISDN number does not represent a mobile station. The serving MSC then determines that the received MSISDN number is a number associated with a particular geographic area and, in order to receive the SMS message, returns a roaming number to the HLR 50 (signal 330.paren close-st.; FIG. 12, step 530). The HLR 50 further forwards the received roaming number representing the serving MSC 40 back to the SMS-GMSC 190 (signal 340.paren close-st.; FIG. 12, step 535). Utilizing the received roaming number, the SMS-GMSC 190 forwards the SMS message to the serving MSC 40 (FIG. 12, step 540). Upon receiving the SMS message (FIG. 12, step 545), a first application module 300 associated with the serving MSC 40 determines which location area is associated with this particular MSISDN number (FIG. 12, step 550). After making such a determination, the application module 300 queries the attached VLR 30 (FIG. 12, step 555). The attached VLR 30 already stores information reflecting which location area each mobile station is currently registered with. Accordingly, by querying the VLR 30, the serving MSC is able to ascertain the MSISDN numbers of the mobile stations located within the determined location area (FIG. 12, step 560).

Detailed Description Text (14):

Thereinafter, the received SMS message can be transmitted to each of the determined mobile stations (FIG. 12, step 565) in a number of different ways. In order to make minimum changes to the existing system, the first application module 300 within the serving MSC 40 can individually and sequentially transmit a message to each of the identified mobile stations using its corresponding MSISDN number. The serving MSC 40 sequentially instructs the serving BSC 70 to page each of the mobile stations 20a-20c and separately transmits the SMS message 210a-210c to the mobile stations 20a-20c, respectively. As another embodiment of the present invention, the first application module 300 within the serving MSC 40 can further transmit the received SMS data along with a list of MSISDN numbers to the BSC 70 serving that particular

location area 160. A second application module 360 associated with the serving BSC 70 then transmits the received SMS data to each of the mobile stations as specified in the received MSISDN list.

Detailed Description Text (16):

A MSISDN number as described in FIG. 7 is assigned to a particular location area in order to reduce the impact to the existing SMS routing mechanism. The SMS-GMSC only receives MSISDN numbers and always requests routing instructions from an HLR associated with the received MSISDN number. As a result, even if the location area specified by the MSISDN number can never physically relocate to a different place, an HLR needs to be associated with the specified MSISDN number and be interrogated by the GMSC.

Detailed Description Text (17):

However, as another embodiment of the present invention, reference is now made to FIG. 8 illustrating the broadcasting of SMS messages to mobile stations located within a particular location area without performing a home location register (HLR) interrogation. Instead of assigning a MSISDN number to a particular location area, a wireline directory number is assigned to the particular location area and associated with a telecommunications device serving that particular location area. Thereinafter, whenever the SMS-C 180 receives a request to route an SMS message to a wireline directory number, a third application module 370 within the SMS-C 180 determines that the specified directory number is not a mobile number and transmits an application layer message 380, such as a Transaction Capabilities Application Part (TCAP) message, encapsulating the SMS message directly towards the serving MSC 40 associated with the specified wireline directory number. This is accomplished by transmitting a TCAP message using the received wireline directory number as a Signal Connection Control Part (SCCP) destination address. After receiving the TCAP signal, the first application module 300 within the serving MSC 40 extracts the encapsulated message and determines which location area 160 is associated with the specified wireline directory number. Thereinafter, in a manner similar to the methods and systems as described in FIG. 7, SMS messages 210a-210c are transmitted to mobile stations 20a-20c, respectively, located within the identified location area 160.

Detailed Description Text (18):

In accordance with the teachings of the present invention, a MSISDN number or wireline directory number can further be assigned to a particular cell area within a location area. Reference is now made to FIG. 9 illustrating the broadcasting of SMS messages to mobile stations located within a particular cell area 170. In case the directory number is assigned to a particular cell area, the SMS message is first routed to the MSC 40 serving that particular cell area. In a manner similar to storing data identifying the location area for each of the mobile stations traveling within a MSC coverage area, the attached VLR 30 further stores data identifying the cell area covering each mobile station. Such data may include Cell Global Identity (CG.I) or Cell Identity (CI) identifying each cell area. As a result, upon querying the VLR 30, the first application module 300 determines the identities of the mobile stations traveling within the specified cell area, and in a manner similar to the method and system as described above, SMS messages are broadcast to each of the identified mobile stations.

Detailed Description Text (19):

Alternatively, the serving BSC 70 providing mobile service to the particular cell area 170 maintains data identifying the mobile stations currently located within the specified cell area 170. Accordingly, the serving MSC 40 transmits the received SMS message directly to the serving BSC 70. The second application module 360 associated with the serving BSC 70, in turn, determines which mobile stations are currently located within its coverage area 170 and transmits SMS Messages 210a-210c to the mobile stations 20a-20c, respectively.

Detailed Description Text (20):

As another embodiment of the present invention, reference is now made to FIG. 10 illustrating the serving MSC transmitting SMS messages to mobile stations located within a particular cell area 170. After receiving an SMS message with a directory number associated with a particular cell area, the serving MSC 40 determines the BSC 70 associated with the specified cell area 170 and transmits a signal requesting the identities of mobile stations currently located with the specified cell area 170 to the serving BSC 70 (signal 400). The second application module 360 within the serving BSC 70 ascertains the list of mobile stations currently being served by the BSC 70 and returns that list to the serving MSC 40 (signal 410). Utilizing the list of mobile stations received from the serving BSC 70, and in a manner similar to the method and system as described above, the serving MSC 40 transmits SMS messages 210a-210c to the mobile stations 20a-20c, respectively (signal 420).

Detailed Description Text (21):

As another alternative for broadcasting unstructured data to mobile stations, reference is now made to FIG. 11 illustrating the broadcasting of USSD messages to mobile stations traveling within a particular service area. An external node 250, such as a service provider, transmits a USSD message encapsulating the unstructured data to be broadcast using the MSISDN number assigned to that particular service area as a called party number. The transmitted USSD message is routed to the HLR associated with the specified called party number (signal 440). The USSD handler 230 associated with the HLR 50 determines the identity of the MSC 40 associated with the specified MSISDN number and, in turn, forwards the USSD message to the serving MSC 40. The USSD handler 240 associated with the MSC 40 then extracts the encapsulated unstructured data from the received USSD message. In a manner similar to the broadcasting of SITS messages as described in FIGS. 7-10, an application module 460 associated with the serving MSC 40 then determines the identity of the mobile stations currently located within the specified service area and broadcasts the USSD messages 430a-430c to the mobile stations 20a-20c via the BSC 70, respectively. As described above, the service area specified by the received MSISDN number may include a MSC coverage area, location area, or a cell area within a particular location area.

Detailed Description Text (22):

As another embodiment of the present invention for broadcasting USSD messages, a wireline directory number is assigned to a service area. Instead of transmitting a USSD message to the HLR 50, a USSD message or other connection-less signal is transmitted directly from the external node 250 to the MSC 40 serving that particular service area. Once the signal is received by the serving MSC, as described above, the application module 460 broadcasts the received data to the mobile stations traveling within the specified location area.

Detailed Description Text (25):

FIG. 1 is a block diagram of a telecommunications network including a Public Land Mobile Network (PLMN) 10 for providing mobile service to a mobile station 20. Whenever the mobile station 20 travels into a particular mobile switching center (MSC) coverage area, a visitor location register (VLR) 30 associated with the serving MSC 40 copies into its memory the relevant subscriber information from the home location register (HLR) 50 associated with that particular mobile subscriber. Thereinafter, whenever the mobile station 20 originates an outgoing call, the radio signal 60 requesting an outgoing call setup is received by the base station controller (BSC) 70 connected to the serving MSC 40. The received request is then forwarded to the serving MSC 40 who, in turn, processes the call setup request with the help of the subscriber information stored in the VLR 30. If the outgoing call connection is towards a wireline terminal 80, the call setup signal, such as an Initial Address Message (IAM) signal, is then transmitted from the serving MSC 40 to the connected Public Switched Telephone Network (PSTN) 90 to establish the call connection.

Detailed Description Text (30):

Signaling for telecommunications services is normally performed in a structured way. For example, specific predefined data, formats, and signals names are used to setup a speech connection, to perform handovers, and to authenticate mobile subscriber information when providing telecommunications service to a mobile subscriber. With the introduction of the Global System for Mobile (GSM) communications and the Personal Communications System (PCS), a number of new and advanced supplementary services are being provided to mobile subscribers. Since these supplementary services utilize user specified data, there are no structured ways to communicate these data between a serving Public Land Mobile Network (PLMN) and a mobile station. As a result, a number of unstructured message protocols have been developed for the GSM or PCS environment. One such protocol is the Short Message Service (SMS) protocol for one-way transporting of information between a PLMN and a mobile station. Another protocol is Unstructured Supplementary Service Data (USSD) which has been introduced to enable user interaction between GSM PLMN applications and a mobile station in a transparent way through the mobile telecommunications network. It is transparent because no review or manipulation of the contents of the message is performed during transportation.

Detailed Description Text (31):

Reference is now made to FIG. 5 where a block diagram illustrating the communication of a Short Message Service (SMS) message between a Short Message Service Center (SMS-C) 180 and the mobile station 20 is shown. The SMS-C 180 receives a string of alphanumeric characters to be transmitted to the mobile terminal 20. Such characters can be received from another telecommunications terminal or from a service operator. The SMS-C 180 encapsulates the entered character data into a packet message, such as Signaling System No. 7 (SS7) signals or X.25 protocol packets, and routes the message to a Short Message Service--Gateway Mobile Switching Center (SMS-GMSC) 190 within a PLMN 10 serving the mobile station 20. In a manner similar to the routing of an incoming call within a PLMN as described in FIG. 1, the SMS-GMSC 190 interrogates the home location register (HLR) 50 associated with the mobile station 20 for routing information (i.e., an identification of where the mobile station 20 is currently located) and subsequently routes the message to a Mobile Switching Center (MSC) 40 serving the mobile station's current location. The mobile station 20 is paged and a connection is set up between the mobile station 20 and the PLMN network 10. If the mobile station 20 is already busy, the connection setup is not performed because the network already knows that the mobile station 20 is accessible. If the connection has been successful, and thereby the mobile station 20 authenticated, the MSC 40 encapsulates the character data into an SMS message 210 and delivers the SMS message 210 to the mobile station 20 over one of the control data channels via a connected base station controller (BSC) 70. A control data channel such as a Stand-alone Dedicated Control Channel (SDCCH) is used instead of a traffic channel (TCH) to allow connection-less data communications. After receiving the SMS message 210 encapsulating the character data, the mobile station 20 acts merely as a buffer and passes the data to the attached Subscriber Identity Module (SIM) card 200. The SIM card 200 then stores the received data into an internal buffer or memory register. Lastly, if the delivery has been successful, a successful delivery report is sent back from the MS 20 to the serving MSC 40, and subsequently from the serving MSC 40 to the SMS-C 180. Otherwise, a failure report is generated.

Detailed Description Text (32):

By utilizing SMS messages and an SIM card, a subscriber feature provider within a telecommunications network can deliver the latest subscriber feature information to the mobile station 20 without requiring the mobile station 20 to be taken in for manual service. For example, whenever the mobile subscriber adds or deletes a new number from his speed dialing subscriber feature, the feature provider can remotely update the mobile station 20 with the mobile subscriber's latest speed dialing lists or options without inconveniencing the mobile subscriber. An application

module associated with the mobile station 20 can further process and display the received data on a display unit attached to the mobile station 20 for user

interaction:

Detailed Description Text (33):

FIG. 6 is a block diagram illustrating the communication of a USSD message 220 between a USSD external node user 250 and a mobile station 20. USSD messages are utilized by the mobile telecommunications network to transport user defined data to a mobile station 20 or an application module within the mobile station 20. Therefore, instead of storing the received character data into an SIM card, the received data are either directly manipulated by the feature application modules within the receiving mobile station 20 to provide special subscriber feature functions or displayed on a display unit for user interaction. Therefore, two parties within a mobile telecommunications network can utilize USSD messages to communicate text messages back and forth without establishing a speech connection.

Detailed Description Text (34):

The external node user 250, such as another telecommunications terminal or service provider, transmits a USSD message encapsulating the character data to the HLR 50 within the serving PLMN 10. The HLR 50 is associated with a number of different MSCs within the same PLMN 10. As the mobile station 20 travels from one MSC area to another, the HLR 50 receives location update signals and keeps record of the mobile station's current location. Whenever a USSD signal is received by the HLR 50, the HLR 50 ascertains the current location of the mobile station 20. A first USSD handler 230 within the HLR 50 thereafter transparently forwards the USSD signal to the appropriate MSC 40 currently serving the mobile station 20. A second USSD handler 240 within the serving MSC 40 receives the transmitted message and transports the USSD message 220 to the mobile station 20 over a connection-less communications link via a connected BSC 70. A third USSD handler 260 within the mobile station then receives the transmitted USSD message 220, extracts the encapsulated character data, and forwards the extracted data to the appropriate application module. One example of such an application module is a user interface module for displaying the received character data onto a display unit attached to the mobile station 20.

Detailed Description Text (35):

Conventionally, SMS and USSD messages are utilized to communicate user defined text messages from a telecommunications device within a telecommunications network to a particular mobile station or to all mobile stations traveling within a particular mobile switching center (MSC) coverage area. As a result, in order to communicate messages to mobile stations located within a certain geographic area., the telecommunications device generating the messages must inefficiently and inconveniently identify and specify the Mobile Subscriber Integrated Service Digital Network (MSISDN) number associated with each of the targeted mobile stations and sequentially transmit a message to the specified mobile stations. In order to avoid sequentially sending the message to each mobile station, as an alternative, the serving MSC can blindly transmit broadcast messages to all mobile stations located within its MSC service area.

Detailed Description Text (36):

Reference is now made to FIG. 7 illustrating the broadcasting of SMS messages to mobile stations located within a particular location area in accordance with the present invention. In accordance with the teachings of the present invention, a Mobile Subscriber Integrated Service Digital Network (MSISDN) number is assigned to a particular geographic area and associated with a telecommunications device serving that particular geographic area (FIG. 12, step 505). Thereinafter, whenever a telecommunications user wishes to transmit a message to all mobile stations located within the designated geographic area (FIG. 12, step 510), an SMS message encapsulating the message is routed utilizing the MSISDN number assigned to that particular geographic area as the destination address. For example, the SMS-C 180

receives a request to transmit an SMS message towards the MSISDN number associated with a particular location area. Not knowing that the specified MSISDN number represents a geographic location instead of a mobile station, the message is first routed to the SMS-GMSC 190 serving that particular PLMN 10 (FIG. 12, step 515). In a manner similar to the routing of a normal incoming SMS message, the SMS-GMSC 190 requests a routing instruction from the HLR 50 associated with the specified MSISDN number (signal 310; FIG. 12, step 520). The HLR 50, storing a record specifying that the specified MSISDN number is being served by a particular MSC 40, further transmits a roaming number request towards the serving MSC 40 (signal 320; FIG. 12, step 525). Up to this process, no entity or device within the PLMN has determined that the specified MSISDN number does not represent a mobile station. The serving MSC then determines that the received MSISDN number is a number associated with a particular geographic area and, in order to receive the SMS message, returns a roaming number to the HLR 50 (signal 330; FIG. 12, step 530). The HLR 50 further forwards the received roaming number representing the serving MSC 40 back to the SMS-GMSC 190 (signal 340; FIG. 12, step 535). Utilizing the received roaming number, the SMS-GMSC 190 forwards the SMS message to the serving MSC 40 (FIG. 12, step 540). Upon receiving the SMS message (FIG. 12, step 545), a first application module 300 associated with the serving MSC 40 determines which location area is associated with this particular MSISDN number (FIG. 12, step 550). After making such a determination, the application module 300 queries the attached VLR 30 (FIG. 12, step 555). The attached VLR 30 already stores information reflecting which location area each mobile station is currently registered with. Accordingly, by querying the VLR 30, the serving MSC is able to ascertain the MSISDN numbers of the mobile stations located within the determined location area (FIG. 12, step 560).

Detailed Description Text (37):

Thereinafter, the received SMS message can be transmitted to each of the determined mobile stations (FIG. 12, step 565) in a number of different ways. In order to make minimum changes to the existing system, the first application module 300 within the serving MSC 40 can individually and sequentially transmit a message to each of the identified mobile stations using its corresponding MSISDN number. The serving MSC 40 sequentially instructs the serving BSC 70 to page each of the mobile stations 20a-20c and separately transmits the SMS message 210a-210c to the mobile stations 20a-20c, respectively. As another embodiment of the present invention, the first application module 300 within the serving MSC 40 can further transmit the received SMS data along with a list of MSISDN numbers to the BSC 70 serving that particular location area 160. A second application module 360 associated with the serving BSC 70 then transmits the received SMS data to each of the mobile stations as specified in the received MSISDN list.

Detailed Description Text (38):

Accordingly, the Emergency Service Bureau (ESB) can transmit emergency messages to all mobile stations located within a particular location area by transmitting an SMS message towards the MSISDN number associated with that particular location area. Once the message reaches an MSC serving that particular location area, the mobile stations currently traveling within the targeted location area are determined by querying the VLR and the emergency message is accordingly transmitted to each of the identified mobile stations.

Detailed Description Text (39):

A MSISDN number as described in FIG. 7 is assigned to a particular location area in order to reduce the impact to the existing SMS routing mechanism. The SMS-GMSC only receives MSISDN numbers and always requests routing instructions from an HLR associated with the received MSISDN number. As a result, even if the location area specified by the MSISDN number can never physically relocate to a different place, an HLR needs to be associated with the specified MSISDN number and be interrogated by the GMSC.

Detailed Description Text (40):

However, as another embodiment of the present invention, reference is now made to FIG. 8 illustrating the broadcasting of SMS messages to mobile stations located within a particular location area without performing a home location register (HLR) interrogation. Instead of assigning a MSISDN number to a particular location area, a wireline directory number is assigned to the particular location area and associated with a telecommunications device serving that particular location area. Thereinafter, whenever the SMS-C 180 receives a request to route an SMS message to a wireline directory number, a third application module 370 within the SMS-C 180 determines that the specified directory number is not a mobile number and transmits an application layer message 380, such as a Transaction Capabilities Application Part (TCAP) message, encapsulating the SMS message directly towards the serving MSC 40 associated with the specified wireline directory number. This is accomplished by transmitting a TCAP message using the received wireline directory number as a Signal Connection Control Part (SCCP) destination address. After receiving the TCAP signal, the first application module 300 within the serving MSC 40 extracts the encapsulated message and determines which location area 160 is associated with the specified wireline directory number. Thereinafter, in a manner similar to the methods and systems as described in FIG. 7, SMS messages 210a-210c are transmitted to mobile stations 20a-20c, respectively, located within the identified location area 160.

Detailed Description Text (41):

In accordance with the teachings of the present invention, a MSISDN number or wireline directory number can further be assigned to a particular cell area within a location area. Reference is now made to FIG. 9 illustrating the broadcasting of SMS messages to mobile stations located within a particular cell area 170. In case the directory number is assigned to a particular cell area, the SMS message is first routed to the MSC 40 serving that particular cell area. In a manner similar to storing data identifying the location area for each of the mobile stations traveling within a MSC coverage area, the attached VLR 30 further stores data identifying the cell area covering each mobile station. Such data may include Cell Global Identity (CGI) or Cell Identity (CI) identifying each cell area. As a result, upon querying the VLR 30, the first application module 300 determines the identities of the mobile stations traveling within the specified cell area, and in a manner similar to the method and system as described above, SMS messages are broadcast to each of the identified mobile stations.

Detailed Description Text (42):

Alternatively, the serving BSC 70 providing mobile service to the particular cell area 170 maintains data identifying the mobile stations currently located within the specified cell area 170. Accordingly, the serving MSC 40 transmits the received SMS message directly to the serving BSC 70. The second application module 360 associated with the serving BSC 70, in turn, determines which mobile stations are currently located within its coverage area 170 and transmits SMS Messages 210a-210c to the mobile stations 20a-20c, respectively.

Detailed Description Text (43):

As another embodiment of the present invention., reference is now made to FIG. 10 illustrating the serving MSC transmitting SMS messages to mobile stations located within a particular cell area 170. After receiving an SMS message with a directory number associated with a particular cell area, the serving MSC 40 determines the BSC 70 associated with the specified cell area 170 and transmits a signal requesting the identities of mobile stations currently located with the specified cell area 170 to the serving BSC 70 (signal 400). The second application module 360 within the serving BSC 70 ascertains the list of mobile stations currently being served by the BSC 70 and returns that list to the serving MSC 40 (signal 410). Utilizing the list of mobile stations received from the serving BSC 70, and in a manner similar to the method and system as described above, the serving MSC 40 transmits SMS messages 210a-210c to the mobile stations 20a-20c, respectively (signal 420).

Detailed Description Text (44):

As another alternative for broadcasting unstructured data to mobile stations, reference is now made to FIG. 11 illustrating the broadcasting of USSD messages to mobile stations traveling within a particular service area. An external node 250, such as a service provider, transmits a USSD message encapsulating the unstructured data to be broadcast using the MSISDN number assigned to that particular service area as a called party number. The transmitted USSD message is routed to the HLR associated with the specified called party number (signal 440). The USSD handler 230 associated with the HLR 50 determines the identity of the MSC 40 associated with the specified MSISDN number and, in turn, forwards the USSD message to the serving MSC 40. The USSD handler 240 associated with the MSC 40 then extracts the encapsulated unstructured data from the received USSD message. In a manner similar to the broadcasting of SMS messages as described in FIGS. 7-10, an application module 460 associated with the serving MSC 40 then determines the identity of the mobile stations currently located within the specified service area and broadcasts the USSD messages 430a-430c to the mobile stations 20a-20c via the BSC 70, respectively. As described above, the service area specified by the received MSISDN number may include a MSC coverage area, location area, or a cell area within a particular location area.

Detailed Description Text (45):

As another embodiment of the present invention for broadcasting USSD messages, a wireline directory number is assigned to a service area. Instead of transmitting a USSD message to the HLR 50, a USSD message or other connection-less signal is transmitted directly from the external node 250 to the MSC 40 serving that particular service area. Once the signal is received by the serving MSC, as described above, the application module 460 broadcasts the received data to the mobile stations traveling within the specified location area.

CLAIMS:

2. The method of claim 1 wherein said step of transmitting said received data further comprises the step of transmitting a Short Message Service (SMS) message encapsulating said included data.
3. The method of claim 1 wherein said step of transmitting said included data further comprises the step of transmitting an Unstructured Supplementary Service Data (USSD) message encapsulating said included data.
15. The method of claim 10 wherein said step of transmitting said connection-less signal comprises the step of transmitting a short message service (SMS) signal over a control channel to said each of said plurality of mobile stations traveling within said geographic area.
21. The system of claim 16 wherein said means for transmitting said connection-less signal further comprises means for transmitting a short message service (SMS) signal over a control channel to said each of said plurality of mobile stations traveling within said geographic area represented by said received unique directory number.

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Terms	Documents
L43 and (text\$ near2 message)	7

Database:

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Set Name	Query	Hit Count	Set Name result set
	DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR		
<u>L44</u>	L43 and (text\$ near2 message)	7	<u>L44</u>
<u>L43</u>	token and (remov\$ with chip\$) and (order\$ with (service or goods or product or item)) and @ad<=19980623	46	<u>L43</u>
<u>L42</u>	L4 and 705/26-28.ccls.	0	<u>L42</u>
<u>L41</u>	L40 and 705/26-28.ccls.	2	<u>L41</u>
<u>L40</u>	token and (remov\$ with chip\$) and (order\$ with (service or goods or product or item)) and @ad<=19980623	46	<u>L40</u>
<u>L39</u>	token and (remov\$ with (chip near2 card)) and (order\$ with (service or goods or product or item)) and @ad<=19980623	2	<u>L39</u>
<u>L38</u>	token and (chip near2 card) and (order\$ with (service or goods or product or item)) and @ad<=19980623	48	<u>L38</u>
<u>L37</u>	token and "chip-card" and (order\$ with (service or goods or product or item)) and @ad<=19980623	0	<u>L37</u>

<u>L36</u>	token and chipcard and (order\$ with (service or goods or product or item)) and @ad<=19980623	7	<u>L36</u>
<u>L35</u>	L33 and (order\$ with (service or goods or product or item))	2	<u>L35</u>
<u>L34</u>	L33 and (service or goods or product or item)	10	<u>L34</u>
<u>L33</u>	L11 and (token\$ and chip\$)	10	<u>L33</u>
<u>L32</u>	L19 and (token\$ and chip\$)	0	<u>L32</u>
<u>L31</u>	L20 and ((text\$ or messag\$) with protocol)	6	<u>L31</u>
<u>L30</u>	L20 and (text\$ with messag\$ with protocol)	0	<u>L30</u>
<u>L29</u>	L27 and (token\$ and chip\$)	0	<u>L29</u>
<u>L28</u>	L27 and (token\$ or chip\$)	4	<u>L28</u>
<u>L27</u>	L11 and (text\$ with messag\$)	4	<u>L27</u>
<u>L26</u>	L16 and (text\$ with messag\$)	0	<u>L26</u>
<u>L25</u>	L16 and (text\$ withmessag\$)	2	<u>L25</u>
<u>L24</u>	L16 and (text\$ near2 messag\$)	0	<u>L24</u>
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<u>L22</u>	L19 and token	0	<u>L22</u>
<u>L21</u>	L20 and token	0	<u>L21</u>
<u>L20</u>	L19 and (text near2 message)	14	<u>L20</u>
<u>L19</u>	L4 and (ussd and sms)	34	<u>L19</u>
<u>L18</u>	L5 and (ussd and sms)	0	<u>L18</u>
<u>L17</u>	L6 and (ussd and sms)	0	<u>L17</u>
<u>L16</u>	L11 and (chip\$ with card)	2	<u>L16</u>
<u>L15</u>	L13 and (chip\$ with card)	0	<u>L15</u>
<u>L14</u>	L13 and (sim\$ with card)	0	<u>L14</u>
<u>L13</u>	L12 and ((chip or sim\$) or remov\$ or detach\$ or attach\$)	25	<u>L13</u>
<u>L12</u>	L11 and (order\$ with (service or goods or product or item))	25	<u>L12</u>
<u>L11</u>	L6 not 18	48	<u>L11</u>
<u>L10</u>	L5 and 705/? .ccls.	1	<u>L10</u>
<u>L9</u>	L5 and 705/26-28.ccls.	0	<u>L9</u>
<u>L8</u>	L6 and 705/? .ccls.	1	<u>L8</u>
<u>L7</u>	L6 and 705/26-28.ccls.	0	<u>L7</u>
<u>L6</u>	L5 and transaction	49	<u>L6</u>
<u>L5</u>	token\$ and (mobile with radio\$ with network\$) and @ad<=19980623	104	<u>L5</u>
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<u>L3</u>	L1 and token\$	1	<u>L3</u>
<u>L2</u>	L1 and radio\$	1	<u>L2</u>
<u>L1</u>	5867494.pn.	1	<u>L1</u>

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